Effective National Infrastructure

Balancing detail and flexibility – through planning to delivery

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based on UCL research undertaken on behalf on NIPA
There is £500 billion worth of planned investment in over 700 major projects and programme across the UK to 2020-21. Major projects are coming on stream.

Infrastructure and Projects Authority, 2016

Two thirds of company executives believe that Britain’s infrastructure is worse than that of other advanced economies. Perceptions on the quality of the UK’s infrastructure need changing.

Lloyds Bank, 2017

The UK is ranked 9th the in the world for the overall quality of its infrastructure in 2015, behind Germany (8th), France (7th). Improvements can still be made.

World economic forum – Global Competitiveness Index, 2015

Infrastructure in the UK has suffered from under-investment, compared with competitor countries.

OECD, 2015

Confidence that overall infrastructure will improve in the coming five years has fallen and a significant majority of firms are not optimistic that infrastructure in aviation, energy and roads will improve.

Confederation of British Industry, 2016

In 2015/16 infrastructure spending delays and cancellations were estimated to amount to £4.6bn. Money is wasted, and communities are disadvantaged, by delivery failures.

Arcadis CEBR, 2016

There are 15% potential savings from streamlining infrastructure delivery.

McKinsey Global Institute, 2013

Why is delivery of effective national infrastructure so important?

Analysis undertaken by the World Economic Forum has shown that the most successful economies in the world have large-scale and efficient infrastructure. Put simply, effective national infrastructure enables the economy and businesses to operate more efficiently and there are quantifiable links between infrastructure investment, competitiveness and productivity gains.

Equally, spending on national infrastructure is an investment in people and communities. Infrastructure silently underpins many aspects of our daily lives: delivering heat and power to our homes; providing clean drinking water; removing waste; and enabling people to travel both here and abroad.

The UK has performed reasonably well in international comparisons for the quality of its infrastructure. Despite this, it is striking that many UK businesses and communities believe that the UK lags behind other comparator countries for the quality of, and amount of investment in, its major infrastructure.

The UK’s productivity remains below other competitor nations, so further improvements to, and investment in, major infrastructure have a key role in narrowing this gap. The effective planning, design and delivery of schemes to ensure infrastructure is most cost effective, environmentally sustainable, and maximises its benefits to communities, is an important part of this narrative.

For many years, there were concerns about what was perceived as a slow and uncertain process for approving major infrastructure projects, which was costly, complex and opaque for many participants, especially affected communities.

The 2008 Planning Act was introduced to provide greater certainty for promoters, whilst protecting the interests of affected stakeholders and communities. Since its inception, this process has underpinned the efficient delivery of development consent for many of the projects associated with the National Infrastructure Plan.

However, the need to further improve infrastructure delivery is widely understood, and questions are being asked by a range of stakeholders about whether the greater planning certainty offered by the Act is being offset by other factors which are acting to constrain the effective design and delivery of national infrastructure projects, and whether these factors can be addressed.

These questions are answered:

- It explores how planning can support more effective infrastructure delivery.
- It is based on a detailed review of empirical evidence about potential factors and their impact, undertaken by University College London at the request of NIPA.
- It proposes recommendations to support more effective infrastructure delivery; and
- It provides a call for action from a range of organisations to support their implementation.

Can better planning improve national infrastructure delivery?

Why do you need to read this report?
The regime... is delivering its core objective of enabling planning decisions to be taken more quickly and with greater certainty than under the old regimes.

CLG, 2013, 7

Now that we’re delivering under the DCO, I think it’s a fantastic consent overall. It does give us almost all the powers we need to deliver the project, it places controls on us where it’s appropriate to do...

(research participant)

We know that we will get a decision on, or before [date] next year, which will really help us in terms of planning, for the supply chain, but also for bidding in for financial support...

(research participant)

The Planning Act 2008 introduced a new development consent process for Nationally Significant Infrastructure Projects (NSIPs).

The Planning Act regime was designed to create greater certainty. Applications are determined in accordance with National Policy Statements (NPSs), setting out the need for infrastructure by sector and the policies that Government considers relevant to decision making. This removes a significant element of uncertainty which was considered problematic in previous regimes.

The process for obtaining a DCO was also intended to be streamlined and faster, with statutory timescales for examination and decision making set at 12 months. These benefits are traded off against the need for extensive design development, assessment and consultation during the pre-application period.

The Localism Act 2011 amended the original provision for decision making by an independent commission, with the effect that now, a decision to grant a Development Consent Order (DCO) is made by the relevant Secretary of State following recommendations from an Examining Authority (appointed examiners within the Planning Inspectorate).

NSIPs were originally limited to large scale developments relating to energy, transport, water or waste, over certain specified thresholds. The Growth and Infrastructure Act 2013 introduced an extension to the regime to allow certain business and commercial projects to opt in, and the Housing and Planning Act 2016 introduced the provision for NSIPs to include up to 500 homes.

Overall, the new NSIP regime is viewed as ‘hugely beneficial’ (see Donelly 2015 and Johnston 2014) by those engaged in the process. The speed of decision making, the greater certainty of a positive outcome, and the style and effectiveness of the examination process have been widely celebrated, by all parties involved, from communities to promoters.

But as the regime is still in its relative infancy, it is inevitable that some teething problems have emerged. A number of incremental improvements have taken place since its inception, which have responded to particular issues that have arisen during its early years. These have been broadly welcomed.

However, many stakeholders, of all types, have raised concerns about what appears to be the very substantial levels of detail which are being required at all stages of the process, and the impact that this can have for effective delivery.

Is there too much detail in the assessment, examination and specification of projects?

Is this constraining the ability of promoters to deliver infrastructure in the most effective way?

Is this hindering innovation?

Is this helping to protect the interests of local communities and the environment?

Would greater flexibility in consents help to deliver more effective projects?

…and if so, what should we do to address this?

Finding answers to these questions about detail and flexibility, and solutions to the issues they raise, is the primary purpose of this research project, undertaken by University College London on behalf of NIPA.
In 2016 the ‘NIPA Insights’ programme was launched to commission research of significance to members. This summary report is the output of the first NIPA insights initiative. It is intended to support improvements in practice, not criticism of the NSIPs regime, for which there is considerable support within NIPA and beyond.

Why is NIPA taking the lead?

The National Infrastructure Planning Association (NIPA) was set up in November 2010 with the aim of bringing together individuals and organisations involved in the planning and authorisation of major infrastructure projects. It seeks to develop and disseminate learning and best practice for both promoters and those affected by infrastructure projects, including communities.

One of NIPA’s core objectives is to:

- Develop, share and champion best practice, and improve knowledge, skills, understanding and engagement by providing opportunities for learning and debate about national infrastructure planning.

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Researching detail and flexibility – Why now?

Following the 2008 Act, the immediate focus of much interest was on gaining experience of the process leading towards the DCO, particularly pre-submission and environmental assessment, and the process of securing and specifying consent through the Development Consent Order.

Now, some of the early projects have been constructed, and more are under or moving towards construction, the focus is shifting towards delivery. This means that critical and interesting questions can be asked about the effectiveness of the NSIPs planning process in providing a platform for the effective delivery of projects - the ultimate goal of any consenting regime.

In particular, there is an emerging perception that a precautionary approach by many players - promoters, examiners, consultees and communities - may be leading to a greater focus on detail at the expense of effective and transparent project planning and implementation.

It is only now that many schemes are moving towards delivery, that there is sufficient experience to enable some of these issues to be evaluated. This means that meaningful conclusions on the relationship between the DCO application, consent and delivery can be derived, the purpose of which are to support continuous improvement, for all stakeholders in the process, whatever their interest in project outcomes.

Of the 75 NSIP schemes submitted up to September 2016...

Of the 50 NSIPs consented by September 2016...

It’s still relatively early days for the NSIP process

But now some of the early schemes are being delivered
In response to concerns about levels of detail, and the potential benefits of greater flexibility, NIPA wanted to explore these issues in greater depth, and set the following objective for research:

**Does the Planning Act process deliver the certainty and flexibility necessary to attract investment, permit innovation during the design and construction process, and support cost effective infrastructure delivery – whilst providing appropriate protection for affected landowners and communities?**

Research was commissioned that would collate evidence about:

- the level detail required in assessment, application and examination; and
- the impact of current practice, including the quality of the process for all stakeholders.

It would also provide recommendations on achieving a better balance between detail and flexibility.

NIPA was keen to engage an independent academic research team to undertake primary research. This was to ensure that the approach was not only thorough but, critically, considered all the evidence found in an impartial way to ensure that recommendations presented would be not only practical but reflect the views of all stakeholders.

A research team from University College London was appointed in the Autumn of 2016. The UCL team was led by Professor Janice Morphet and Dr Ben Clifford, and 6 months of in-depth study has taken place.

Their research, summarised in this report, comprised a detailed literature review, 35 interviews, 2 case studies, and inputs from NIPA members via a stakeholder group and several roundtable discussions. It has been an extremely inclusive process.

This is NIPA’s summary and response to UCL’s extensive research and detailed analysis. UCL’s findings can be found in two separate reports, which provide further information about the evidence collated and the conclusions drawn by the research team.

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**NIPA Insights Research**

**The research question**

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**NIPA’s evidence-based approach**

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**UCL’s research reports contain a wealth of useful information**
They’ve been actually implementing it and building it out, they said ‘good heavens, we’ve tied ourselves up in knots here, we didn’t give ourselves enough flexibility, it’s been really difficult to actually get the detailed design sorted within the parameters that we gave ourselves and boy, if we were doing this again, we would certainly do it differently.

(research participant)

You spend time and energy and resources actually looking into relatively spurious matters that don’t, ultimately, affect the decision.

(research participant)

There’s actually a better solution … but we can’t use it because it [the DCO] actually specified the type we will use.

(research participant)

You do need to go through the change process because everything’s so fixed and actually, does it really make a difference?

(research participant)

You go out to tender and say you want the best contractors and you want innovation, creativity to deliver better value, then you put this massive straightjacket on people and say ‘but you have to operate within this’.

(research participant)

The contractor is saying I need to put down a bit of extra fill … and I’m saying … that would be great … but you are on the wrong side of the DCO line so actually you can’t do that.

(research participant)

Attempts have been made to quantify the impacts and consequences potentially arising from unnecessarily levels of detail, and any subsequent constraints on flexibility in DCOs. However, this is difficult to quantify because the consequence is often to not do something, or to do something which takes longer, which logically is never costed in the way that a completed project is.

However, the estimation that GDP would have been £6bn higher in 2015 had it not been for infrastructure spending delays and cancellations amounting to £4.6bn (Arcadis 2016), begins to illustrate the potential magnitude of the impact.

Most participants in this research project believed that too much detail during the preparation, examination and specification of an NSIP was an issue of significant concern to them, particularly where it resulted in a lack of flexibility in project specification. These concerns include:

- Pre-application/pre-examination – The cost and uncertainty associated with the detailed design and appraisal for a scheme, at a time when insufficient information is available about the construction and operational requirements, and before it secures an in-principle consent, and the potential risk of further costs and delays associated with seeking post scheme amendments where things have been fixed too soon;

- Examination/Decision making – The time and cost needed to prepare highly complex, technically dense and long documents, which are impenetrable by non-experts wishing to engage with the process, and can lead to a focus on detail at examination that does little to improve the quality of decision making, or in the event of a consent, the quality of the resulting project; and

- Implementation – The drafting of highly constrained requirements which over-complicate the discharge process for both promoter and regulator, restrict innovation and technological development, limit future opportunities for reducing costs and improving environmental and community protection, both during construction and in the final project.

These issues clearly have impacts for promoters, but there is also evidence that there are impacts for other stakeholders; including for communities, when promoters accept sub-optimal solutions to avoid further cost and (in particular) delay to scheme implementation; and for landowners if, for example, the flexibility afforded by temporary possession of land is not considered to avoid more land take occurring than is strictly necessary.

The current high level of detail in the system is seen by some as running counter to the intentions of the original 2008 Act – not just the faster more efficient process for gaining consent it was designed to engender, but also the flexible nature of other major infrastructure consenting regimes it was aimed to reflect.

Ultimately, there is a perception by many that the level of detail put forward, assessed and specified is constraining what is contained with the DCO itself, which in turn acts as a constraint on delivery. Over-specifying detail, or fixing things too soon, reduces the amount of flexibility available at the project implementation stage.

Robust, quantitative evidence of the effects of too much detail is not easy to find

Our quantitative research identified a wide range of concerns

Too much detail is not just a problem for promoters
Detail and flexibility in the NSIP process

Lack of cohesive focus on project deliverability through the framework provided by legislative, policy and guidance, the need for flexibility and appropriate level of detail.

Potential for promoters to over assess detail of scheme and its mitigation requirements to optimise chances of securing a DCO and to minimise post consent risk of challenge.

Potential for statutory consultees and LPAs to seek greater scheme assessment and specification to deliver greater certainty for communities, the environment and adjacent uses.

Potential for precautionary approach to examination of scheme and mitigation detail, and its specification through the Development Consent Order - risk of judicial review?

Increasing evidence of Secretary of State’s willingness to require more detailed specification through DCO amendments - risk of judicial review?

Potential for constraints on flexibility in design and construction, taking account of delivery and technological innovation which might enhance scheme impact and performance.

Is there evidence of unnecessary detail in the Planning Act process?

Yes. The level of detail required in assessment, application, and examination, is perceived - by all research participants - to be high.

Not all participants felt that all detail was unnecessary, but many felt that there has been an increase in the level of detail sought over time. Others believe that a culture around the need for detail has been present since inception, for a variety of reasons.

However, the extent to which detail is sought, and its resultant impact, is highly dependent on:

- Project type
  - Off shore wind schemes will have markedly different requirements to, for example, linear road projects.
- Location
  - Proximity to urban areas, other critical infrastructure or sensitive environmental designations, may generate the need for more information;
- Scale
  - There is an inevitable level of greater complexity for large scale schemes such as Hinkley Point C Nuclear Power Station or the Thames Tideway Tunnel;
- Complexity
  - Some schemes propose highly complex designs and construction method;
- Promoter objectives
  - Vary between publicly funded projects such as roads where implementation is likely, and others such as power stations (being entered into the capacity market - with less certainty about final delivery); and
- Financial constraints
  - Some schemes result in much work undertaken post-consent when there is greater confidence in the project and financing can be secured.

What is detail being driven by?

A precautionary approach, on the part of many of those involved in the NSIP process, is a core driver of the quest for detail, but there are many complex and overlapping reasons:

- Communities, Landowner and Statutory Undertaker interests’ desire for certainty about the precise effects of a scheme and the effects of its construction;
- A desire to have things fixed, because of a perception about the consequences of possible Judicial Review or subsequent amendment to a DCO, material or non-material, or because of concerns that stakeholder interests will not be addressed at a later stage;
- Failure by promoters to consider issues of delivery upfront, leading to acquiescence to requests for more detail, when greater flexibility may be needed;
- Failure to fully explore and understand the potential of the requirement discharge process to provide for flexibility and protection of interests, leading to a tendency towards being risk averse - by all players; and
- Incentives to secure the DCO - with this being seen as an end in itself rather than part of a whole project process culminating in delivery and operation.

...so yes, it has become more complicated.
(research participant)

People wanted to see absolute detail... you always want to think fully baked.
(research participant)
Defining the purpose and the desired outcomes of infrastructure investment should precede the design of a technical solution, creating opportunities to innovate, to propose alternatives that may improve delivery of the benefits, maximise operational performance and minimise whole life costs.

Infrastructure and Projects Authority, 2016

The contractors come in, they’ve got brilliant ideas… that’s their innovation, but then, if we’d known that when we were drafting the DCO we could have perhaps build in a bit more flexibility.

(research participant)

Certainly in terms of early engagement… the more detail there is upfront about the nature of the application, they more likely it is to be able to do an assessment of the impact on the significance… for us then to say ‘yes, that’s fine as is,’ or ‘actually, we just need to have some parameters down there to make sure that it’s not adversely affected’.

(research participant)

Quite a lot of efficiencies and the big money is going to be the same as in construction…and the contractor’s knowledge is changing…parameters set up in applications…could actually fetter that, and that’s got real implications for building a safer scheme, building a more efficient scheme and building a scheme that also delivers on our environmental KPI’s.

(research participant)

As the design has evolved, based on better information… then you have to change your design, but you’ve only got the flexibility of what the DCO allows.

(research participant)

Is the devil always in the detail?

No, Detail can be necessary to ensure decisions are well founded and stakeholder interests protected

What matters is the balance between detail and flexibility

It is clear that for some stakeholders a level of detail is reassuring - that there is absolute clarity about the specifics of a scheme and its impacts relatively early on in the process.

The requirement for detail can often be justifiable. There are clear and legitimate reasons for requiring detail on some issues in order to understand what is being consented, its impact and mitigation.

There may, in fact, be a requirement for more detail in the pre-application assessment and examination stage, to create the envelope in which a desired level of flexibility for delivery later on can be achieved.

Knowing where there is a need for detailed assessment and specification, and where there is not, may be an important consequence of focusing on delivery right from project inception, rather than an initial focus on the achievement of a DCO.

What matters is that the level of detail assessed through examination and specified in the DCO itself needs to be carefully balanced against the potential need for flexibility to meet the particular circumstances of the project at the delivery stage, whilst ensuring that the interests of stakeholders and local communities are protected.

Engagement with stakeholders about infrastructure delivery and what is needed to support this, from the start, will help to build confidence that the right balance has been achieved.
Case Study of Galloper Wind Farm

An estimated £1.5b offshore generating station and its associated electrical connection (Suffolk Coast)

Under construction.

Flexibility was allowed for in this DCO with an ‘envelope’ assessment and a ‘not environmentally worse than’ approach to both the offshore wind turbines and onshore substation. Provision was made for the temporary use of land for both the carrying out and maintenance of the development. Limits of deviation were agreed for the turbines and for the cable route. Requirements were used to govern the flexibility in the DCO, providing for example, design parameters for the wind turbines, requirements in relation to offshore safety management, aids to navigation and offshore decommissioning. Provisions allowed for flexibility in design subject to sign off by the planning authority.

“A worst case scenario” was assessed, “defining the substation broadly because of the desire to preserve flexibility for future design” (Bessell et al, 2013: 126). There was a major focus on Habitats Regulation Assessments, with the Examining Authority commenting: “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 research found the ‘envelope’ approach to have been ‘at the heart’ of the Galloper application, and ‘essential’ because of the ‘uncertainty of working in the marine environment’. Flexibility was built into the DCO with a menu of approaches to controlling ornithological impacts, in particular, with drafting allowing an acceptable level of bird mortality to be applied to modelling to agree the turbine size and number of turbines. Despite the given flexibility, a non-material amendment was required to enable construction to proceed. This demonstrates the pace with which construction technology can move, and the need for a good route to make amendments to DCOs even if they have flexibility built into them. A Town and Country Planning application was used to amend the substation (as associated development) rather than amending the DCO itself.

Why can flexibility be helpful?

Flexibility is not a panacea, but can provide better scope for project outcomes

Not all infrastructure schemes, or all parts of all infrastructure schemes, need greater flexibility. Need will vary by sector, scale, location and complexity of project. But, nevertheless, a range of reasons were put forward for having tools to enable greater flexibility where justified and needed. Factors include:

- Commercial necessity – not all end users are known at the time of consent, and may need subtly different requirements than those contained in the DCO;
- Communities, Landowner and Statutory Undertaker interests’ - which may be better served by leaving options open for decision post consent when more information is available, enabling improved decisions and solutions, including on CPO boundaries and temporary possession aimed at returning the greatest amount of land back to the landowner;
- Technological change and innovation - which might support more cost effective or environmentally beneficial ways of delivering the scheme, or of the final scheme design;
- Procurement routes - which may involve design, build and maintain style contracts, which require scope for design development at a later stage;
- Uncertainty about the construction process – which often carries with it the most significant effects on local communities – but which is often not fixed until construction contracts are agreed; and
- Avoiding the substantial costs and delays caused by seeking amendments after consent.

KPMG, 2017

The rapid pace of technological change is also creating... concerns from infrastructure investors who are now assessing the risk of their investments becoming technologically obsolete before the end of their anticipated operational lifecycle.

NB: Numbers in brackets are ‘worst case’ based on conductor size of 1400mm² and burial of between 3.5m to 4.0m

East Anglia ONE – parameters. The total corridor width specified is 55m, but the order allowed for that 55m to be set within a 75m corridor. The order also allowed for some of the ducting for future projects to be dropped, and two trenches were subsequently removed.
Case Study of A14 Cambridge to Huntingdon improvement scheme

Project:
An estimated £1.2 – £1.8bn upgrade to the A14 between Cambridge and Huntingdon

Status:
Under construction.

Routes to flexibility:
The consented DCO made use of limits of deviation and temporary use of land. Requirements were used to govern the consideration of further detail later on through associated documents (through the detailed design stage and the use of a Code of Construction Practice). There were 23 requirements in total covering matters such as pre-construction surveys of protected species to traffic management plans.

Consideration at examination:
There was only one mention of ‘flexibility’ in the Examining Authority’s report: “The applicant’s view was that it was necessary to retain a degree of flexibility given that detailed scheme design was still to emerge... Furthermore, given that the protective provisions include a ‘plan approval’ role of elements of the scheme, these protective provisions would ‘bite’ to give comfort to the relevant parties involved... the drafting amendments include the need for the undertaker to demonstrate to the SoS satisfaction that a deviation in limits would not give rise to any materially new or materially worse adverse environmental effects” (research participant). Transparency about the detail required for affected communities was an important contribution towards securing agreement about post-consent requirements and provisions for temporary possession of land.

Research concluded that the DCO obtained ‘was quite flexible’. Construction and environmental management plans and landscaping plans were used as a way of managing more detail post consent: “it’s a flexible DCO because it authorises, in essence, a reference design/a preliminary design and the detail was not there because Highways England hadn’t yet produced a detailed design” (research participant). Transparency about the detail required for affected communities was an important contribution towards securing agreement about post-consent resolution of requirements and provisions for temporary possession of land.

Summary:
Research concluded that the DCO obtained ‘was quite flexible’. Construction and environmental management plans and landscaping plans were used as a way of managing more detail post consent: “it’s a flexible DCO because it authorises, in essence, a reference design/a preliminary design and the detail was not there because Highways England hadn’t yet produced a detailed design” (research participant). Transparency about the detail required for affected communities was an important contribution towards securing agreement about post-consent resolution of requirements and provisions for temporary possession of land.

How can greater flexibility be achieved?

There are a number of existing frameworks and mechanisms for achieving a consent that supports more flexibility for delivery where needed and justified.

These have been shown to work well in many cases, but the knowledge about them and their use, or their relevance, impact and wider applicability, is not understood well enough, or broadly enough.

They may not - paradoxically - reduce the necessary detail of assessment needed to secure flexibility. More detail may be relevant and important to justify the desired flexibility. Critically important is that any additional detail provided remains navigable and comprehensible to all parties, including communities.

Concept

Hybrid or outline DCOs

Use of envelope assessments (sometimes termed Rochdale assessments)

Options appraisal and consent

Limits of deviation / limits of land to be acquired and used

Temporary possession of land

Discharge of requirements

Use of codes

Concept Principle

Hybrid or outline DCOs

It is possible for a consent to be framed to set out a scheme in outline, with further detail reserved for future agreement, using a variety of methods including standardised and industry recognised codes (see codes below).

The ‘Rochdale Envelope’ has established the principle for flexibility by allowing projects to be broadly defined where details are not yet specified. Environmental Impact Assessment (EIA), works on the basis of a realistic worst case scenario. Consents granted under the Rochdale Envelope principle are conditional on providing the final details for agreement prior to construction.

EIA encourages as good practice alternative options to be assessed. Two or more options can be progressed to examination and, ultimately defined in a DCO, to allow options to be progressed at delivery. More work is required to define and frame options which are capable of future implementation.

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Limits of deviation can be agreed, which are horizontal and/or vertical deviations in the construction of works allowed. Plans typically show the centre line of a linear work, such as a road or railway, and then show the limits either side within which the powers to construct the work can be exercised.

A DCO can make provision for the temporary possession of land listed in the relevant schedule. This may include land subject to compulsory acquisition (CA) where the CA process has not commenced. This gives flexibility for temporary possession where permanent acquisition is ultimately not considered necessary at the design stage.

Requirements often provide further details of schemes that require approval by the discharging authority before commencement. DCO procedures do enable the creation of bespoke requirements and definitions to suit the particular circumstances of a project. There may be opportunities to promote the resolution of detail at the discharge of requirements stage.

DCOs can specify the use of a variety of codes on design, construction and sustainability in requirements. This enables some matters to be considered at a later stage.

Focusing on the construction element is really important, but that's actually... where most flexibility is required.

(research participant)
The theory of the aggregation of marginal gains as applied to detail and flexibility in the NSIP Process...

What else might help?

There are many things that can be done to improve project outcomes. Achieving a better balance between the level of detail specified, and the resultant level of flexibility, would be a significant improvement.

Achieving a better balance should be about enabling a change from a risk averse culture to one which recognises the benefits of flexibility and the level of detail required to secure it alongside the necessary protection for local communities, landowners and statutory undertakers. This will require a range of actions and actors at different stages of the process: actions and actors that will vary according to the project sector, scale, complexity, and location.

Whilst some of these will be about process and technique, some of this will be about increasing confidence in the provision for flexibility for important infrastructure schemes amongst all participants, and in particular amongst those directly affected by their delivery and operation.

Critically, no fundamental reforms to the NSIP regime are needed. There is also no silver bullet enabling the right balance to be achieved for any one project. Instead, what is proposed is a range of measures that, taken together, can achieve a shift in working practices. This is the 'aggregation of marginal gains', by which a range of carefully targeted actions can add up to benefits which are greater than the sum of its parts.

...an enlightened and informed approach to NSIP promotion and implementation.

The aggregation of marginal gains, adopted by British Cycling, has been described as the 1% margin for improvement in everything you do; these small gains adding up to remarkable improvement. This has applications outside sport, and the NSIP process can benefit from this mindset.

Forget about perfection; focus on progression, and compound the improvement.

Sir David Brailsford, General Manager, Team Sky

Thames Tideway (left): The River Transport Strategy, which set a minimum objective for the movement of construction materials by river, a method for monitoring and review, and incentives to achieve more.

Progress Power Design Principles (right): Agreement of the principles that would set the parameters for the detailed design, and discharge of requirements.

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This report presents a number of recommendations for achieving a better balance between detail and flexibility. Taken together, they offer a credible way forward and are derived directly from the evidence reviewed in this research.

All the recommendations have been discussed extensively with NIPA members and research participants to ensure their wider practicability and applicability.

These recommendations have many possible audiences, and their implementation, and the culture change imbued within them, will require collaboration across organisations and communities.

Towards some recommendations

A National Planning Policy, Legislation and Guidance

A1.
National Policy Statements should address deliverability

A2.
Guidance and advice on flexibility and deliverability is needed

A3.
A statutory timetable for non-material amendments to DCOs should be introduced

B Project Management and Early Contractor Involvement

B1.
Promoters should consider Early Contractor Involvement (ECI) in the development and pre-application processes

B2.
Promoters should engage whole project management capability, from conception through to operation.

Public trust and engagement starts with the National Policy Statements. Tackling deliverability upfront in an NPS would set the right direction and ensure appropriate consideration of the need for flexibility during scheme preparation, examination and delivery in practice. When NPSs are reviewed, sector specific needs for flexibility, and the circumstances requiring detail, should be addressed.

Guidance and advice on flexibility and deliverability within the NSIP process does exist, but it has no central focus. Relevant advice should be drawn together in one place, with the role of flexibility clearly specified in relation to each stage of the process including pre-application, examination, DCO drafting and in the discharge of requirements. The guidance should build on the existing routes to flexibility set out on page 19 of this report.

The process for requesting non-material amendments to made DCOs is at odds with the fixed timetable for achieving a DCO. There has also been considerable variation in practice. Government should introduce a statutory timescale for determining non-material amendments to made DCOs, even if this is longer than six weeks. This would increase promoter confidence in seeking minor amendments and support the deliverability of projects.

Construction impacts are often greater than the impacts of the scheme itself. Understanding the likely construction requirements through ECI or constructability advice can provide evidence about the need for flexibility as well as information about how to resolve the detail. This can better support engagement with communities so that they understand why flexibility is being requested.

There are multiple benefits of project management from the initial inception and scoping of the scheme, through pre-application, examination and on to implementation. One of these is the role of project management in enabling promoters to consider from the outset their potential needs for flexibility in the delivery and construction phase. It is particularly important to ensure that there is continuity in understanding the provisions for flexibility in the DCO, through to how these are to be implemented during the construction phase.
C Engagement with stakeholders and communities

C1. Promoters should engage with statutory consultees earlier in the pre-application phase.

Earlier engagement allows statutory consultees to influence design outcomes that would better serve their interests. Early engagement also enables statutory consultees and communities to better understand a promoter’s need for flexibility and why this may in fact serve their interests as well as the promoters. It may be helpful to promoters and their advisors, for statutory consultees to have their own standards and advice to guide their approach to engagement on major infrastructure projects.

C2. Local authorities should have Planning Performance Agreements with the promoters from the outset to support requirements for detail and flexibility in delivery.

Planning Performance Agreements support local authorities in many of their roles in the NSIP process, including the support they provide to local communities during consultation, the preparation of the Local Impact Report, and, potentially resources for the discharge of requirements and codes, where local authorities are designated for that role in the DCO.

C3. Promoters should engage in meaningful dialogue to enable communities to understand the need for, and to give support to, greater project flexibility.

Community engagement must be meaningful. Promoters need to understand this and engage in a genuinely productive dialogue about why and where flexibility is needed, and how this can be achieved to the satisfaction of communities. Where detail is not appropriate at an early stage, mechanisms for future community engagement in the processes of later design and construction should be clear. “You said, we did” approaches to engagement enable communities to see how their views have been taken into account.

C4. A single point of contact should be appointed to engage with communities during delivery.

Meaningful community dialogue post consent is essential. Providing communities with a single point of contact during the discharge of requirements and construction phase would benefit the process. For more complex projects, the appointment of an independent person to this role might be appropriate.

D Pre-application assessment and application documents

D1. Promoters and their advisers should consider their approach to environmental assessment and the potential outcome of that assessment for achieving flexibility in the DCO

Environmental assessment is an important part of understanding the impacts of a scheme and its mitigation. Assessment will often require legitimate and necessary detail. However, all parties involved need to ensure that the approach to environmental assessment is proportionate and focused on the significant effects of the specific project. Preliminary Environmental Information and Environmental Statements should address the link between the approach to environmental assessment and the final implementation of the NSIP. NIPA believes that there are opportunities for:

- the repurposing of the Preliminary Environmental Information Report (PEIR) to scope out detail that is not necessary, and identify detail that is required to provide the flexibility necessary for future effective implementation;
- statements of common ground to describe clearly where agreement has been reached about requirements for flexibility and the means for this to be justified and resolved during implementation, and
- planning statements, or other application documents, to provide a clear statement which draws the project delivery requirements together, the DCO provisions being proposed to secure effective delivery, and where the justification for them and their flexibility can be found.

E The Development Consent Order

E1. DCO drafting needs to better address flexibility for deliverability.

While all DCOs are bespoke, some appear to have included greater degrees of flexibility to support delivery and construction. We recommend that PINS review advice on drafting of DCOs to bring flexibility and delivery to the foreground so that it is addressed more explicitly. We further recommend that examiners and Secretaries of State consider deliverability and constructability when they amend DCOs before they are approved.

Detailed design can be developed post-consent, governed by the requirements of a DCO. Better cross-sectoral understanding of how to frame requirements to permit flexibility during construction, is needed. This would include greater understanding of the use of codes, such as those for construction, design, sustainability and community engagement. More uniform use of codes could increase examiner, local authority, statutory consultee and public confidence in them to support greater flexibility in the DCO.

NIPA believes that further work is needed:

- to understand the impact of DCO drafting on the construction phase;
- on the use of requirements, s106 obligations and other legal agreements, and protective provisions to secure mitigation and protection of statutory undertakings in the most appropriate and straightforward way;
- on the discharge of requirements and obligations, and their implications, including Planning Performance Agreements;
- on the use of codes and potential sector standards.
We recommend that examiners should assure themselves that deliverability and construction have been specifically considered and that any flexibility required to support this has been considered in the process and in the drafting of the DCO. Addressing deliverability in planning statements or other application documents would support this. Where examiners are not satisfied that these issues have been sufficiently addressed, we would recommend that they consider having a specific hearing to consider these issues.

An important aim of many of these recommendations— including seeking early contractor involvement, project management, effective consultation and engagement, and planning performance agreements—is to reduce the need for last minute negotiation which reduces transparency and may force unnecessary detail to be fixed, impacting delivery.

F The Examination

F1. Considering flexibility for deliverability during the examination.

We recommend that examiners should assure themselves that deliverability and construction have been specifically considered and that any flexibility required to support this has been considered in the process and in the drafting of the DCO. Addressing deliverability in planning statements or other application documents would support this. Where examiners are not satisfied that these issues have been sufficiently addressed, we would recommend that they consider having a specific hearing to consider these issues.

F2. Reduce the amount of behind the scenes detailed negotiation during the examination phase by considering flexibility overall.

An important aim of many of these recommendations— including seeking early contractor involvement, project management, effective consultation and engagement, and planning performance agreements—is to reduce the need for last minute negotiation which reduces transparency and may force unnecessary detail to be fixed, impacting delivery.

G Continuous learning and dissemination

G1. A review of the processes for the discharge of requirements to support project flexibility is needed.

NIPA should host a cross-sectoral forum to gain feedback on the discharge of requirements and the implications for discharging them including Planning Performance Agreements. This should include a focus on public accessibility of information about who is responsible for discharging them and how they will be monitored. This forum could support a PINS advice note on the discharge of requirements.

G2. More learning from individual NSIP projects to improve practice in achieving flexibility to support deliverability is needed.

NIPA, on behalf of those engaged in the NSIP process, should collaborate with others to seek to learn from projects that have been constructed and gone through the full consent to construction process, and promote best practice.

G3. More dissemination and training on the application of appropriate detail and flexibility in the delivery of NSIP projects is needed.

NIPA, on behalf of those engaged in the NSIP process, should disseminate learning on how to achieve flexibility for the use of applicants, advisors, and statutory consultees. Training and pre-project support for those with little or no relevant DCO experience, would also be of benefit.

A programme for action

NIPA is keen to work creatively and collaboratively, across sectors, organisations and interests to achieve a better balance between detail and flexibility in the NSIP process.

► On matters of policy, legislation and guidance we would like a dialogue with Ministers and Government departments.

► On matters relating to Project Management and Early Contractor Involvement, NIPA is keen to work with the Major Projects Association.

► Working towards best practice on the preparation of pre-application documents NIPA will take a lead working with project promoters and other stakeholders.

► On advice on the drafting of Development Consent Orders, NIPA would like to work with the Planning Inspectorate.

► On the conduct of infrastructure examinations NIPA would like the Planning Inspectorate to take the lead.

► On effective engagement, NIPA will take the lead working with Local Planning Authority and community representatives with the aim of engendering maximum confidence in the consenting and delivery process.

► On promoting effective learning and dissemination, NIPA is keen to work with the Major Projects Association and other interested professional bodies.