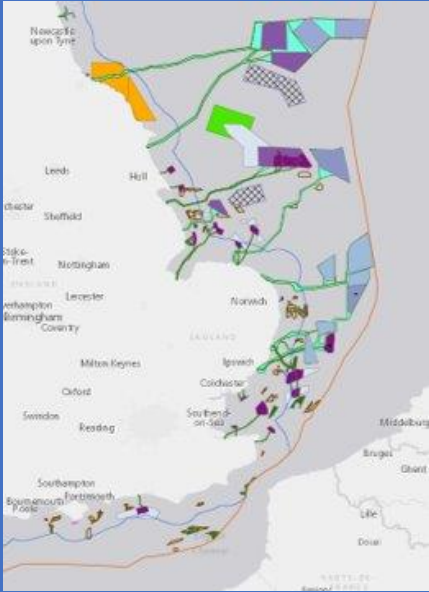


NSIP Centre of Excellence



Getting Ready for an NSIP Commencement



Getting Ready for an NSIP Commencement

Hinkley Point C Requirements Case Study



Hinkley Point C

2008 – Site selection



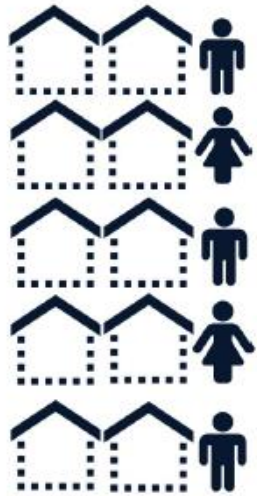
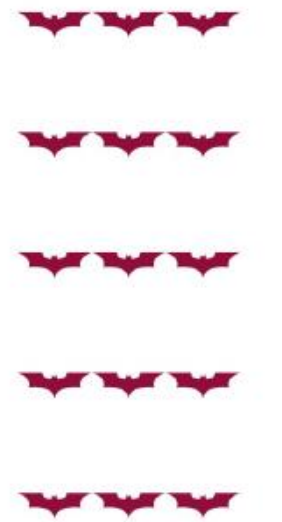
2012 - DCO accepted for examination



2013 – DCO granted consent



Hinkley Point C – Requirements



ENVIRONMENT

DESIGN

AMENITY

TIME

USE

Broken down – that's:-

- **69** pre-commencement requirements (HPC and Associated Development site specific);
- **74** requirements necessitating documents for approval (tied to different triggers);
- **59** requirements which allow subsequent approvals “....*unless otherwise approved in writing....*”;
- **37** compliance requirements



The challenges.....

- Perceptions (?)...(to begin with!)
- DCO Requirement applications to be determined within 5 or 8 weeks (depending on classification);
- Restrictions on requests for additional information within specified time periods;
- Consultations to be issued within 1 day of receipt of application;



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What is working well.....

- **PPA providing dedicated resources;**
- **Bi-weekly progress meetings;**
- **Pre-application before every submission;**
- **Sharing of work programme;**
- **Enthusiastic individuals!**
- **One –team working mentality;**

Progress to date.....

- Quality of DCO Requirement submissions;
- No refusals;
- Vast majority of applications decided within the original deadline;
- Good working relationships



The lessons learnt so far....

- Developers & Local Authorities – think about what you want from the outset;
- Flexibility vs certainty – be mindful of potential implementation issues;
- Keep in regular contact with other stakeholders (e.g. Environment Agency; Highways England, etc.)
- Continuous engagement with the local community is key;



Working to create a world powered by renewable energy

Getting Ready for an NSIP Commencement – Post consent and before the diggers start Developer's eye view

Date: 15th November



Content

Natural Power – who are we

The DCO

Programme

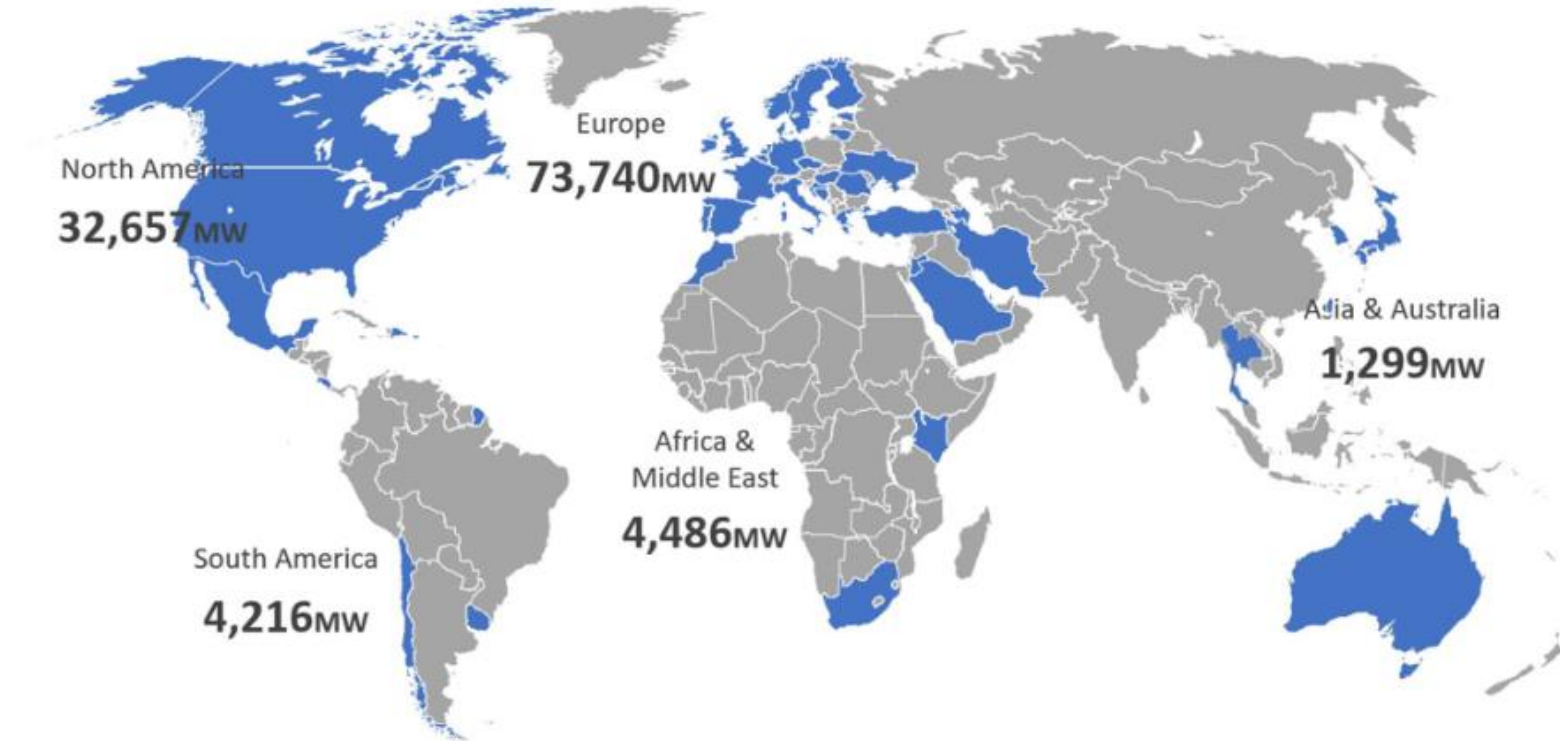
Approach to meetings – working together is key

Approach to documents - take time and allow time

Once construction starts

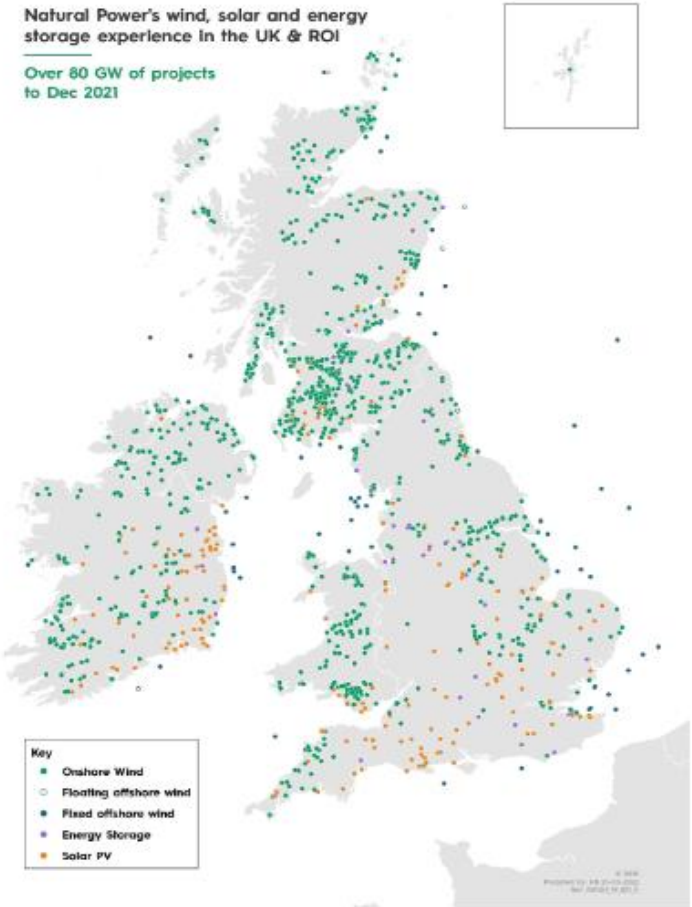
Key messages





Natural Power's wind, solar and energy storage experience in the UK & ROI

Over 80 GW of projects to Dec 2021





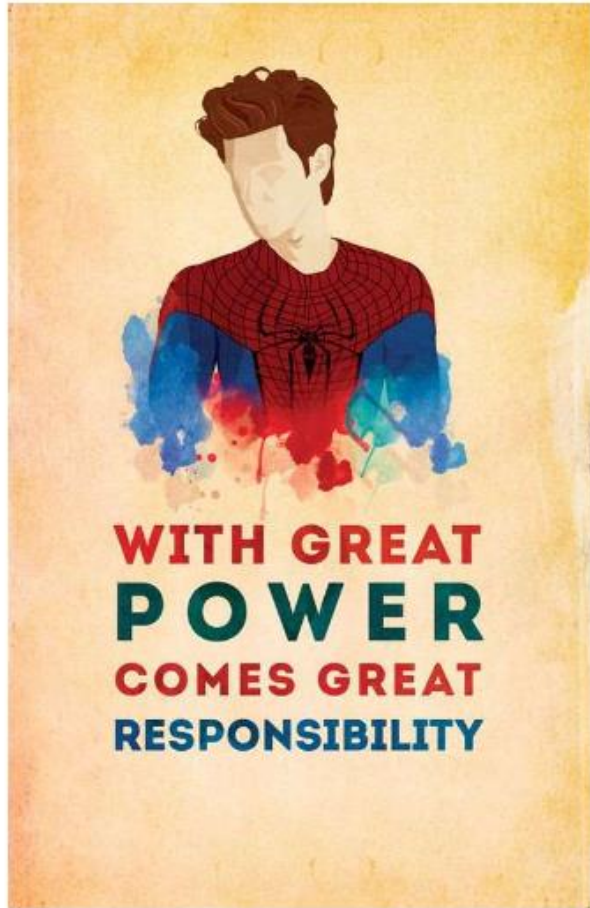
Gaining consent is the first stage but there is still a long way to go until the construction can start

To Do List

- Requirement discharge
- Mitigation
- Licences and permits
- Contractor appointment
- Funding and financial investment decisions
- Land owner negotiations



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DCO

Provides a many powers and provides the developer with the ability to move forward with a development under a single consent. The can be related to:

- CPO's
- Traffic matters
- PRow
- Service redirection

Responsibility to undertake works in an appropriate manner and in accordance with the consent

The power and responsibility applies to developer and authorities

The DCO will never cover everything

Need to fully understand the DCO and ensure that the various mechanisms and how they work are understood – everyone on the project needs to spend time reviewing the DCO – it's the go to document for consenting

- Work together to allow time for the consultation process
- Agree a programme in principle
- Allow for flexibility – it won't go to plan
- Allow time for mitigation – including seasonality
- Update regularly – e.g. at Steering group meetings
- Be honest about other workload management
- Stagger submissions/sign offs where it is possible to do so
- Allow time for things to go wrong – they will
- Understand the critical deadlines
- DCOs do expire

Natural Power – Meetings



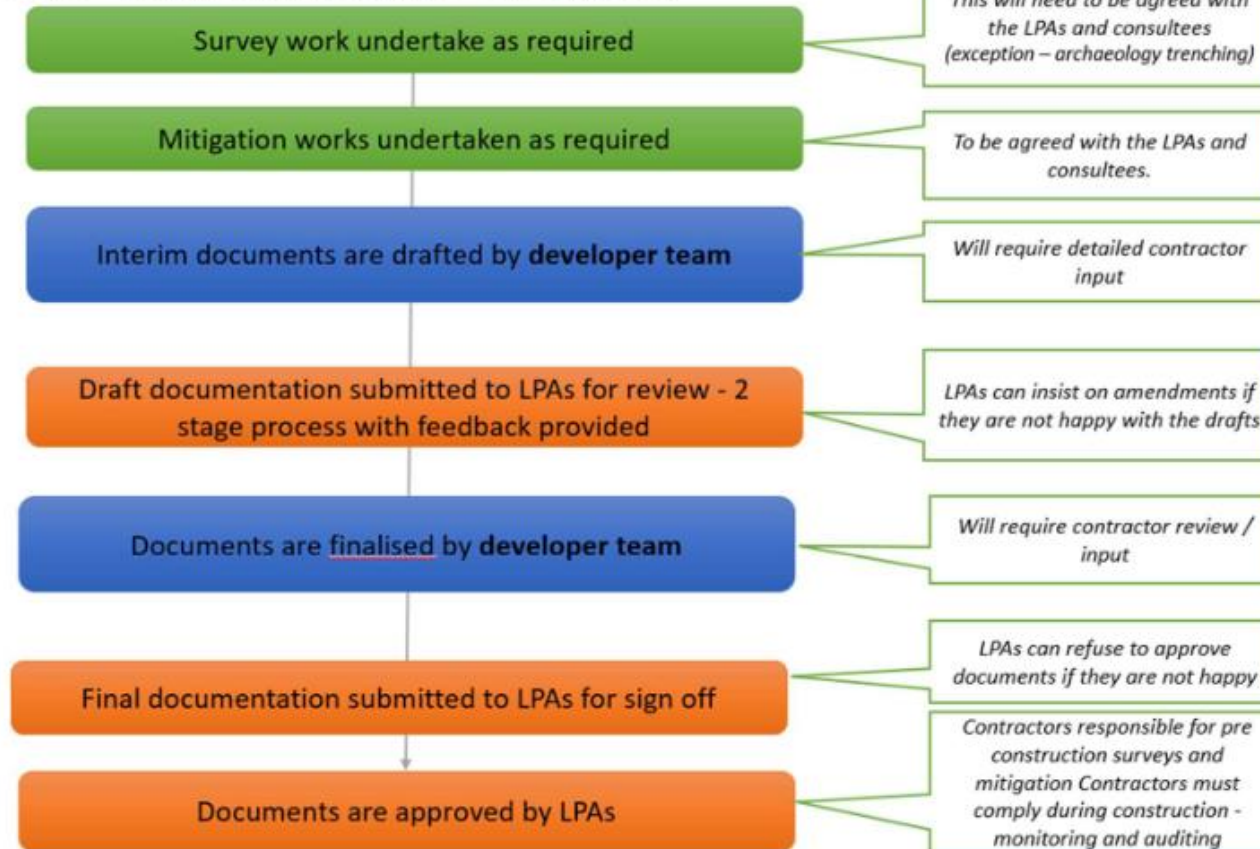
Steering Group	
Attendees	Consents compliance team Communications team County Council Local Planning Authority/ies
Purpose	To provide an update on the progression of pre construction consent compliance works To provide an update on any changes to the programme for the commencement of works To provide an update on the workshops activities To provide an update on any changes to the review process for the discharge of documents
Frequency	Bi Monthly meetings
Reporting	Notes of the meeting
Working Groups	
Groups	Archaeology –LPA, HES Ecology an ornithology –LPA, NE Substation – LPA CC Drainage and contaminated land – LPA EHOs EA, IDB CC Landscape – cable corridor – LPA, CC Traffic and transport - CC
Purpose	To coordinate the approach throughout the for the project for the cable route and sub station To agree the required management plans To agree the required survey programme and mitigation To work to ensure that any required licences etc are in place at the appropriate time
Frequency	Bi monthly in person more frequently if required Bi monthly phone call Review the timing of and need for the next meeting at the bi monthly call
Reporting	Monthly update on key issues

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Natural Power – Approach to discharge of Requirements



Onshore – Requirement Discharge – one approach



atural Power 2021

Ongoing engagement
Implementation meetings
Problem solving
Responding to complaints
Revising documents
Construction works auditing

Post construction monitoring

Key messages

Communication

Collaboration

Cooperation

Organisation



The importance of *following-up* the impacts of NSIP developments : some principles and practice



**Webinar Presentation for Suffolk
County Council NSIP Centre of
Excellence November Event**

by Prof. John Glasson

**Impact Assessment Unit (IAU), Oxford
Brookes University**

15 November 2022

Structure of presentation

1. Importance of follow-up
2. Some follow-up principles and international good practice
3. Case studies: remember Sizewell B?
4. Case studies: something more recent – Hinkley Point C
5. Learning from other NSIPs
6. Some generic recommendations for NSIP follow-up

1. Importance of follow-up

- EIA is used to get project consent; then danger of 'build it and forget it' approach
- Yet many major projects, in sectors such as transport, energy, and minerals, have long life cycles and impact uncertainty and complexity are key features
- EIA should not stop at the decision
- EIA should be an adaptive process to achieve good socio-economic and environmental management over the life of the project, as advocated many years ago by Holling (1978)– *plan, monitor and manage.*

But follow-up is lacking in NSIPs practice

2019 report by the National Infrastructure Projects Association (NIPA):

- *There has been little research on the results of the effectiveness of the environmental monitoring and management during the construction of NSIPs*
- *The sharing of the findings of monitoring could improve decision making, could provide reassurance to communities for whom the anticipation of impact can be more daunting than the reality, and enable developers to improve environmental management practices.'*

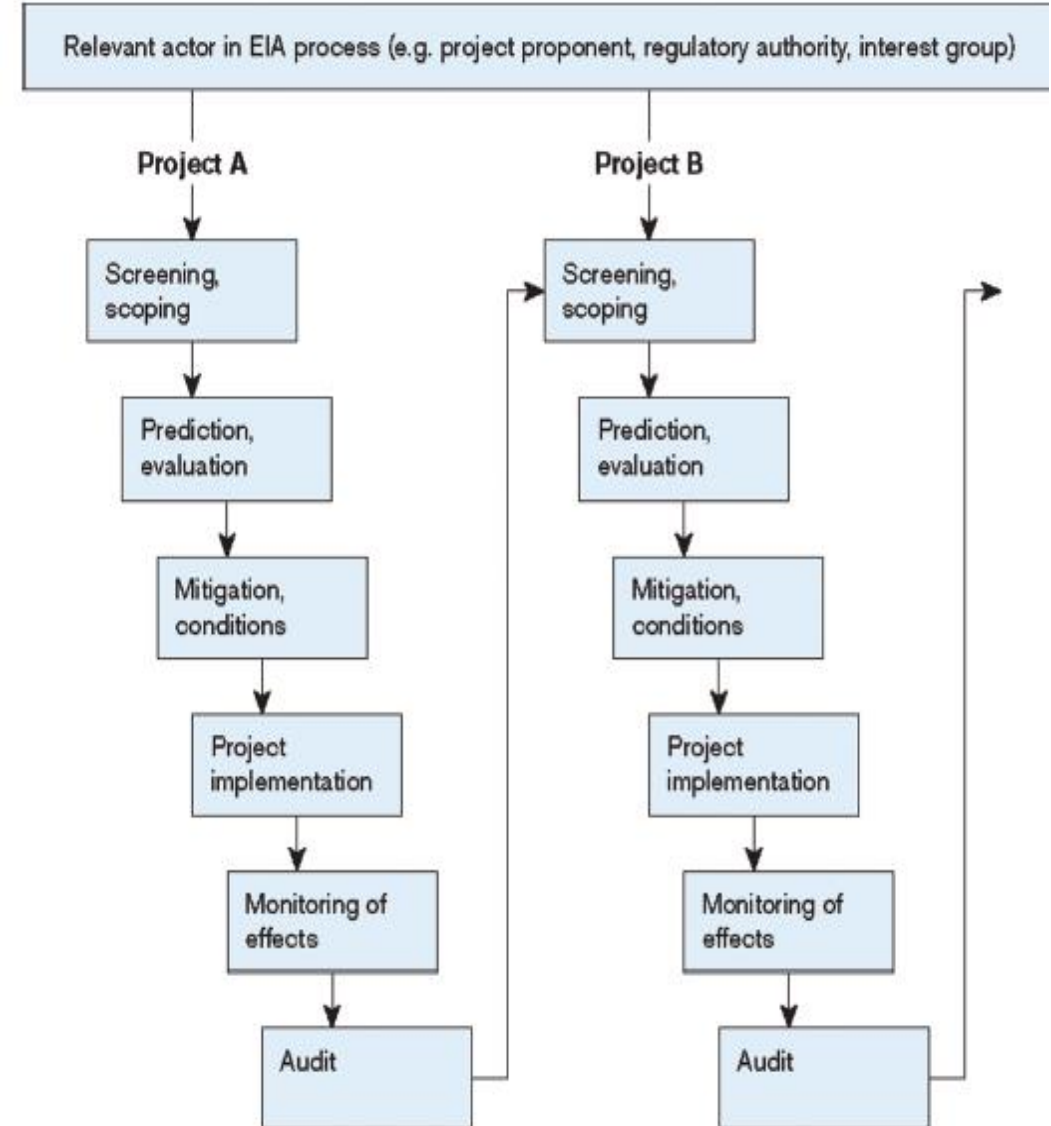
2. Some follow-up principles and good practice

Why follow-up? Some motivating factors for proponents

Key activities in EIA follow-up

More specific roles

Monitoring	Monitoring for conformance with standards Monitoring for compliance with conditions
Auditing	Evaluation of actual against predicted impacts
Management	Management for better project implementation Management for future consents and licences
Communication	Improved stakeholder communication on actual impacts of project and their management
Governance	Structures and processes for implementation of follow-up



But some key barriers to effective follow-up

Structures

- Absence of legislation/regulations to make EIA follow –up mandatory
- Weak implementation even when mandatory
- Resource implications
- Little perceived benefits for proponents of one-off projects
- Partial follow-up (e.g. only construction stage, only bio-physical impacts)
- Lack of independent monitoring and auditing

Processes

- Key issues dispersed across many documents; absence of consolidated monitoring requirements in ES chapter
- Lack of good monitoring data
- Over focus on quantitative indicators
- Lack of community involvement
- Lack of openness about follow-up findings
- Lack of explicit auditing/evaluation criteria (e.g. ranges for accuracy of assessments)

Where is there international good practice in follow-up?

- Good mandatory practice in some countries, including Canada and Australia
- Interesting innovations in other regimes – e.g. Hong Kong's Independent Environmental Checker system (with jail sentences for offences)
- **2017 EU EIA regulations Schedule 4 Part 7 requires “Post –Project Analysis”**. 7. A description of the measures envisaged to **avoid, prevent, reduce or, if possible, offset any identified significant adverse effects** on the environment and, where appropriate, **of any proposed monitoring arrangements (for example the preparation of a post-project analysis)**.
- Mixed practice in the USA; good in California, but in other states – *‘Post decisional NEPA has been like the dark side of the moon: one knows it is there but, in the world of government agencies, no one can see it’*.
- Elsewhere, in many countries, including in the UK, follow-up initiatives have come from the developers and/or the host local authorities

Example of Californian monitoring programme

Mitigation Measure	Responsible Party for Mitigation and/or Monitoring										Frequency					Agency Responsible for Retaining Monitoring Forms				
	Applicant	Consultant for Applicant	U.C. Berkeley	City of Albany	City of Berkeley	CDRF	EBMUD	Prior to Operations or During Construction	Quarterly	Bi-annually	During Rainy Season	Upon Receipt of Complaints	U.C. Berkeley	City of Berkeley	City of Albany	EBMUD	CDRF			
A. Traffic (e.g.)																				
(Road resurfacing)	A.1.2	●			●			●					●	●						
	A.2.2	●	●					●	●	○	●		●	●						
	A.3.2	●	●					●	●	○			●	●						
B. Noise (e.g.)																				
(Noise monitoring)	B.1.2	●		●	●			●	●		●		●	●	●					
	B.2.2	●	●					●	●		●		●	●	●					
	B.3.2	●			●			●			●		●							
C. Drainage (e.g.)																				
(Complete berms beside creeks)	C.1.2	●		●	●	●		●					●	●	●					
	C.2.2	●		●	●	●	●	●		●			●	●	●	○				
	C.3.2	●			●			●					●	●						
D. Air Quality																				
	D.1.2	●	●					●					●	●						
	D.2.2	●						●					●	●						

3. Case Studies: remember Sizewell B?



We're dome... and dry!

WETTING the baby's head... but it was a dry christening for Sizewell B's 72-metre high dome with alcohol-free bubbly poured by Val George, in keeping with the site's dry status.

Brian George, executive director of construction and planning, launched the topping-out ceremony for the secondary containment building with high praise for the

workforce. Throughout the project, the workforces of Nuclear Electric and its contractors have delivered outstanding performances attracting the admiration of the world.

"We've proved we can undertake major projects in time and cost. This power station is setting world standards in quality and safety and this is

reflected in the serious foreign interest being shown in the Sizewell C design.

"I'm sure that the achievements made here will be seen to have provided the foundation for a recovery in the civil and engineering industries both at home and abroad."

The topping-out marks the virtual completion of civil works by John Laing Construction Ltd. The building houses the primary

containment building and steel-lined dome, one-and-a-quarter times the size of the dome of St Paul's Cathedral. More than 43,000 cubic metres of concrete and 9,000 tonnes of rebar have gone into the construction.

The 180 thick steel tendons running through its walls have been tensioned to 1,000 tonnes, compressing the structure in a tight steel grille to give it immense strength.

Monitoring the construction of Sizewell B 1.2 GW nuclear power station (88-96 research)—focus on socio-economics

--background to research ; why monitor—when not mandatory then ?

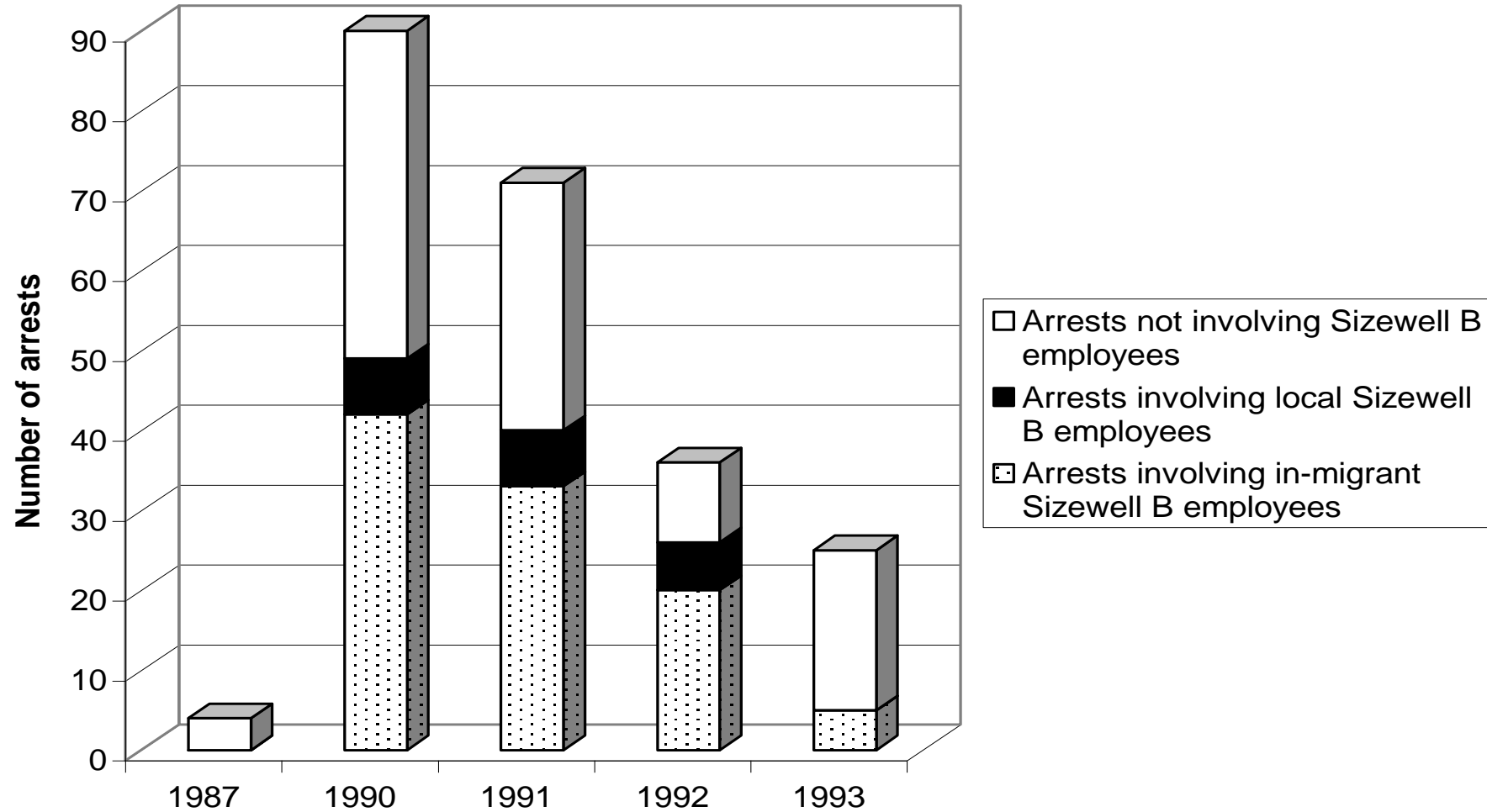
-- approaches used in the study—largely independent approach by IAU at Oxford Brookes; data collection; findings publicly available

Some positive, but differential, economic impacts

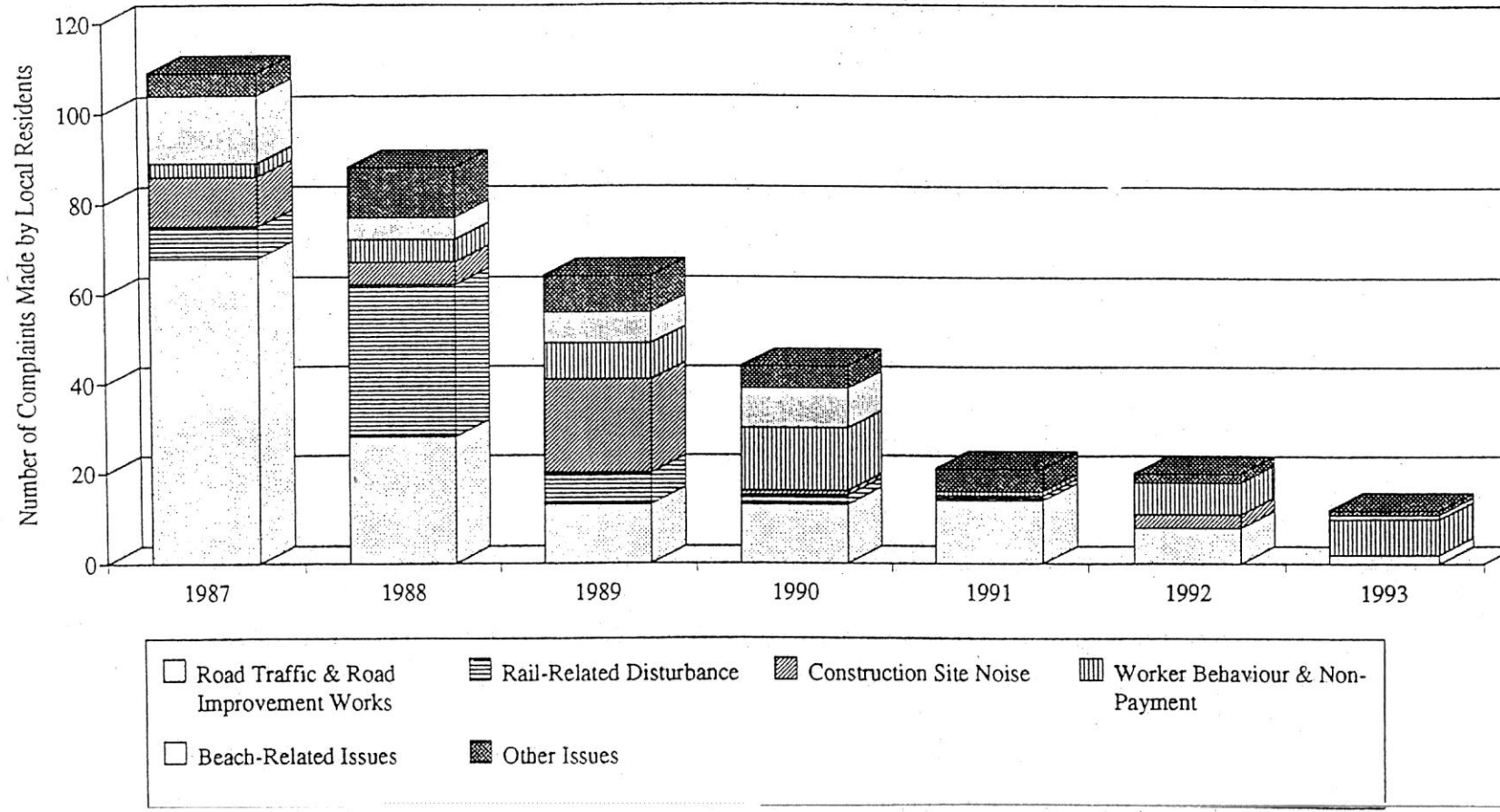
Sizewell B construction – local and non-local labour on site					Sizewell B construction – extent of local labour by contractor types (end of 1991)				
Month (end)	Local Labour	Non-local labour	Total work-force	% Local	Type of contractor	Local labour	Total work-force	% Local	
6.88	569	314	883	64.4	Civil	920	1505	61.1	
6.89	965	879	1844	52.3	Mechanical & Electrical	837	2182	38.4	
6.90	1840	1783	3623	50.8	Site Services and Security	271	281	96.4	
6.91	2212	1984	4196	51.8	Project Management (PPG)	138	417	33.1	
6.92	2105	2533	4638	45.4					
					Total Workforce	2166	4385	49.4	

Some negative, but manageable, social impacts

(a) Drink Driving



Perceived Impacts



4. Case studies: more recent – Hinkley Point C

double reactor development—3.2 GW; located in Somerset, on Bristol Channel, adjacent to HPA&B

initially employing up to 5600 at peak (now 8500)

sponsored by EDF—world's largest nuclear power station operator

current construction work over halfway into 12 year programme



Using world's largest crane – up to 250m tall, and can lift 5000 tonnes load





Some key issues, mitigation and enhancement concerns in examination process

- key factor is % local employment. How to increase local %?
 - how to manage housing and services impacts (e.g. health, crime) of non-local workers?
 - how to minimize local traffic impacts of several thousand extra commuters to/in the area?
 - role of Community Benefits Packages
 - environmental impacts on EU Natura 2000 sites
- nb: Value of SZB monitoring evidence for the IA process*

Why? Research aims to:

- understand and document actual impacts of NNB in the community and on the environment, using early construction years of HPC
- focus on how actual impacts compare with predictions in ES and DCO process
- explain unforeseen events, how they can be managed, with recommendations on better planning and assessment processes for future projects

Who ?

- supported by the New Nuclear Local Authorities Group (NNLAG)-- a Local Government Association (LGA) Special Interest Group of 15 authorities that already host or may host NNBs
- research team: Impact Assessment Unit (IAU), Oxford Brookes University

What ? Sector studies, assessing actual impacts on:

- Economic Development; Transport; Accommodation ; Social and Community;
- Environmental Health and Biophysical Environment

How?

The sector studies had 3 main steps:

- **Identifying issues and obligations;** *indicators and KPIs*; and key data sources, drawing in particular on HPC ES/DCO/S106 and the LIR.
- **Monitoring impacts** – *establishing findings, key indicator trends* and events over main construction stage to date, drawing on **publicly available information**
- **Auditing impacts** – *assessing degree of accuracy of monitoring findings* against predictions; explanations of differences; gaps in monitoring and future proposals.

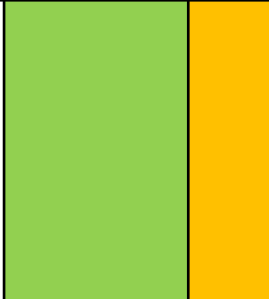
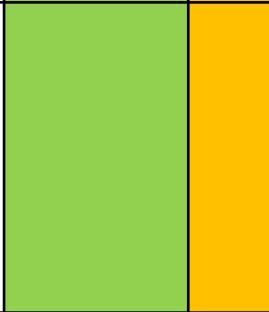
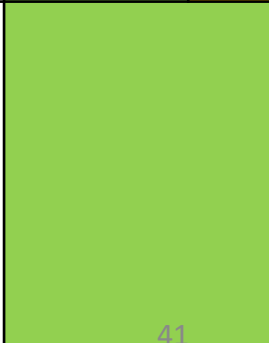
Some research issues:

- fragmented array of indicators/KPIs across massive documentation; contested indicators
- Some good monitoring data (eg on transport, health, some employment); other data much more problematic
- Mix of quantitative and qualitative. Assess against predictions; quantitative ranges where possible. Simple colour coding.

Use of simple RAG colour coding summary for findings:

G	Predictions very accurate with actuals. Fully compliant with conditions/obligations
LG	Most predictions are good, but with a few topic and/or time gaps, and inaccuracies; largely compliant
A	Mixed accuracy/with several topic and/or time gaps, and inaccuracies; only partially compliant
O	Prediction inaccuracies/gaps in many areas; very limited compliance
R	Predictions very inaccurate; non-compliant
B	No information available; auditing not possible at the time of the study

Overall summary of HPC monitoring and auditing findings: accuracy of actual vs predicted impacts to date

<i>Sector</i>	<i>Brief comments</i>	<i>RAG coding</i>
<i>Economic development</i>	Good in many areas--local content, training/education, apprenticeships etc. Mitigation/enhancement measures working well. Debate about some data/gaps.	
<i>Transport</i>	Good against predictions for many indicators -- mode share for workforce journey to site and HGV delivery caps. Issues on driving to P&R sites, and fly parking.	
<i>Social and community</i>	Good performance against indicators, especially for health (on-site Medical Campus), and community safety, including Worker's Code of Conduct.	

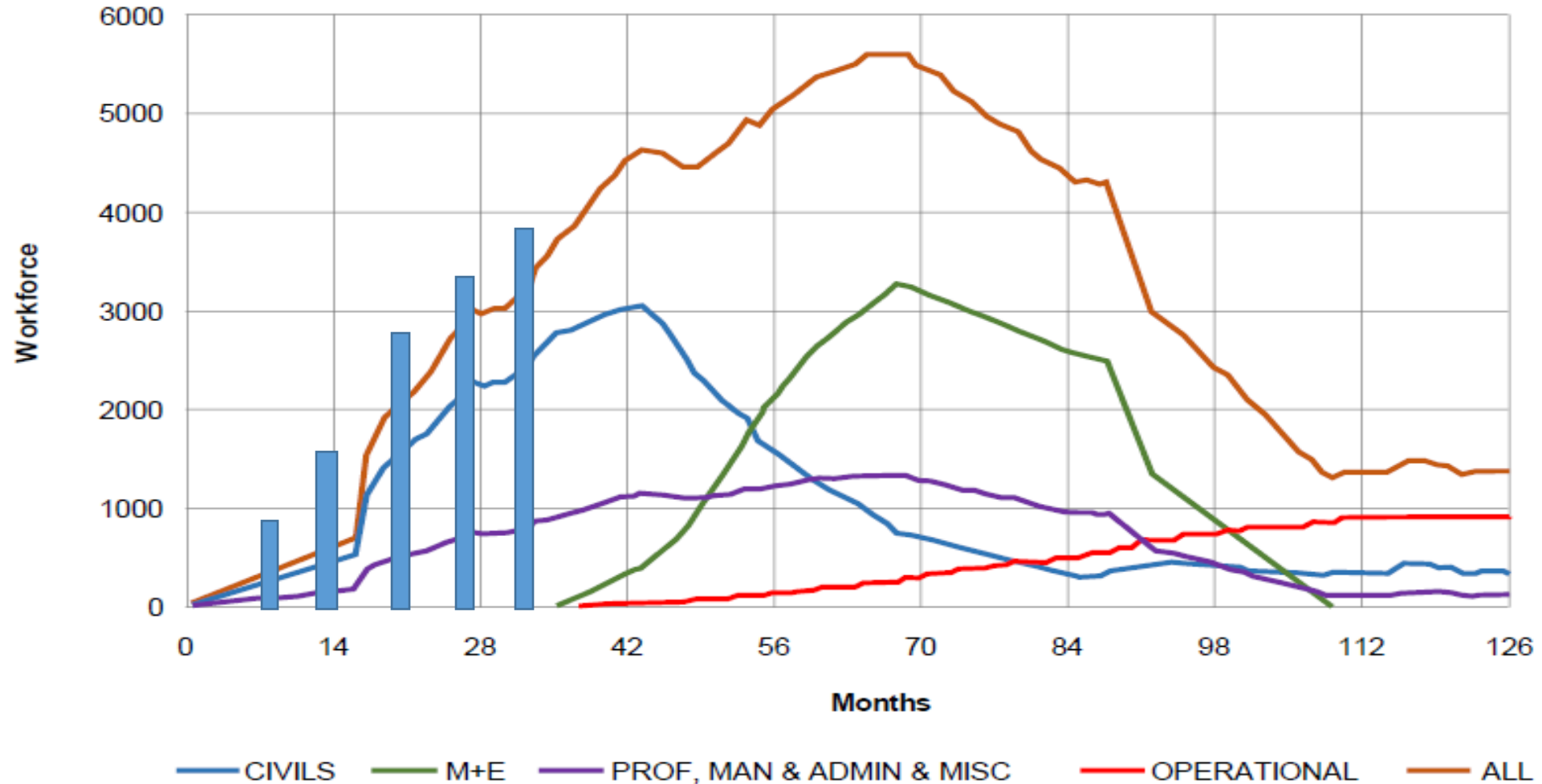
Overall summary (continued)

Sector	Brief comments	RAG coding
Accommodation	Complicated by differing views of predictions and definitions. Where there is data, there does seem to have been some useful housing support initiatives.	Yellow
Environmental health	Team found little publicly available information on monitoring of impacts, such as on noise, air and water quality, other than a low level of complaints.	Yellow and Blue
Biophysical environment	For impact topics, such as ecology, information not publicly available or located to date.	Blue

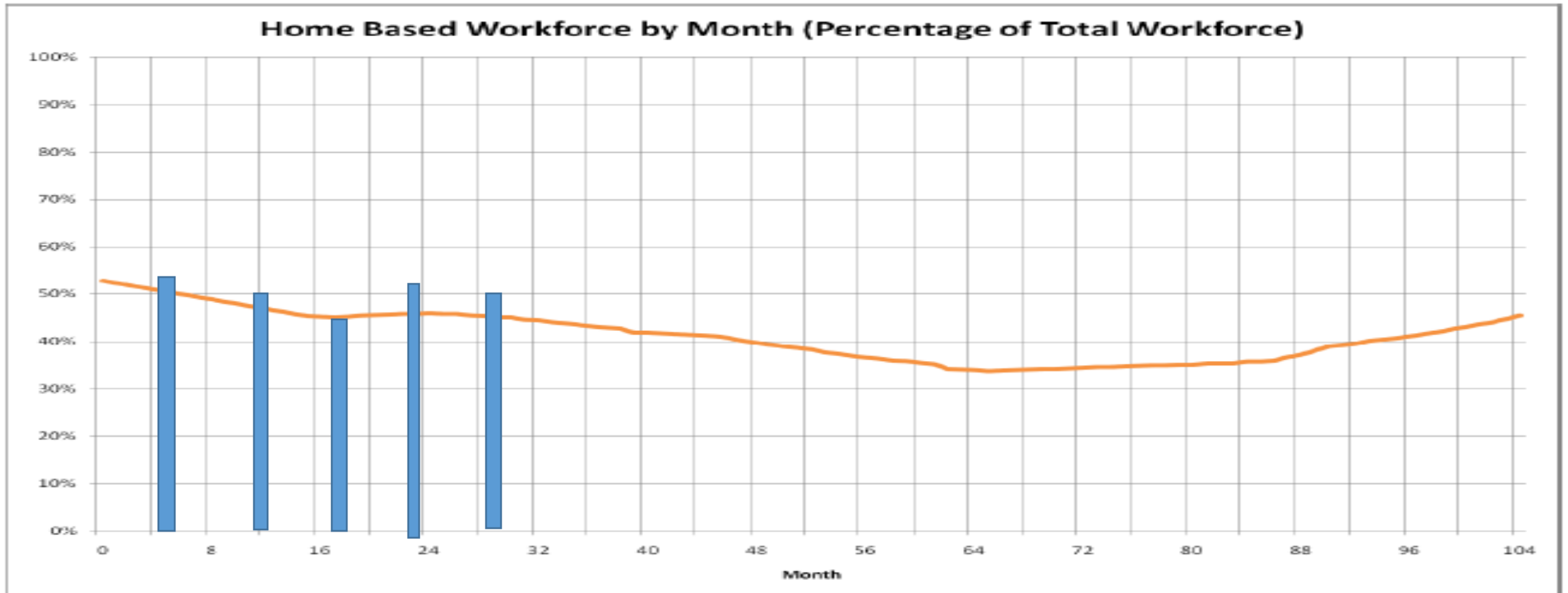
Example of economic development auditing

Impact sector	Commentary on actuals predicted impacts	Summary RAG colour coding	
<i>Local content: Somerset in aggregate and disaggregated</i>	The local Somerset content percentages, in the range of 45-35 % of the total HPC workforce, are substantially above predictions for peak employment. However, detailed HPC 6-monthly Workforce Survey results are not available for the main site and it is not possible to identify the type and level of HPC jobs gained by local people.	G	B
<i>Recruitment from the unemployed</i>	Recruitment from unemployed looks very low at present, but target revision is in hand to reflect lower the unemployment context compared with that at time of predictions.	R	
<i>Recruitment from women</i>	The main site employment is predominantly male at 81%, but the 19% other (predominantly female) is good for the civils work stage of a major project	LG	
<i>Recruitment from other groups</i>	Data not available for other groups, including those with disabilities, those from BAME populations, and by nationality.	B	
<i>Apprentice ships</i>	The project is performing well. The 433 apprenticeships as at April 2019, at less than a quarter into the construction project life, already exceeds the DCO target	G	
<i>Employment Brokerage</i>	The Employment Brokerage is performing well in terms of registrations - over 15,000 by early 2019. Of these, 672 people entered work through the HPC Job Service, with a 49% local component.	G	
<i>Training, Educational Initiatives</i>	There has been a wide range of training, outreach and agency initiatives, underpinned by substantial financial commitments by EDFE, and others, with good take-up	G	

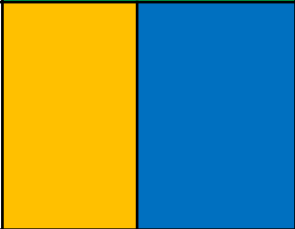
Construction Workforce Labour Demand Curve —Estimated (curves) and Actual (blue cols) Workforce Numbers to date (Month 0 is taken as mid-2016)



CDCZ actual local content % (cols) compared with predicted (curve)



Social and community – some examples

<i>Indicator/KPI</i>	<i>Examples of monitored impacts</i>	<i>RAG coding</i>
<i>Local health</i>	No significant change in health issues (eg mental, sexual) during build up of construction stage. <i>On-site Medical Centre</i> very successful in minimising impacts on NHS services.	
<i>Local health services</i>		
<i>Crime and local policing</i>	Avon and Somerset Constabulary (ASC) data shows crime trends in Hinkley Zone are similar to trends in Somerset.	
<i>Specific crime issues: night time economy</i>	Sensitive locations (eg Bridgwater Town Centre, Stogursey) have shown crime falls/ little change over 2016-2018 period.	
<i>Local quality of life (eg Stogursey Parish)</i>	PC minutes indicate welcome use of Community Impacts Mitigation (CIM) fund. Evidence of increasing impacts on wellbeing from noise, traffic, caravan and site spoil-dump issues.	

Transport – some examples

<i>Indicator/KPI</i>	<i>Examples of monitored impact</i>	<i>RAG coding</i>
<i>Workforce--journey to work to HPC site</i>	HPC Site Journey to Work by Bus has a target of 87%. Since Q1 2017, has been well over 90% for each quarter.	
<i>Workforce – travel to P&R sites</i>	Travel to and from J23 and J24 dominated by single car drivers with target of 58/60% being consistently exceeded with 80/75% respectively. Promotion of HPC Car Share to meet targets in hand.	
<i>HGVs – deliveries targets</i>	Consistent compliance with caps : Mon-Fri (750), Saturday (375) and Quarterly Average (500)	
<i>HGVs – breaches of construction works limits</i>	Breaches of HGV limits, timing restrictions, routing violation have all been consistently in the very low single figures	

Explanation of findings and differences between actual and predicted impacts

Positive findings, including:

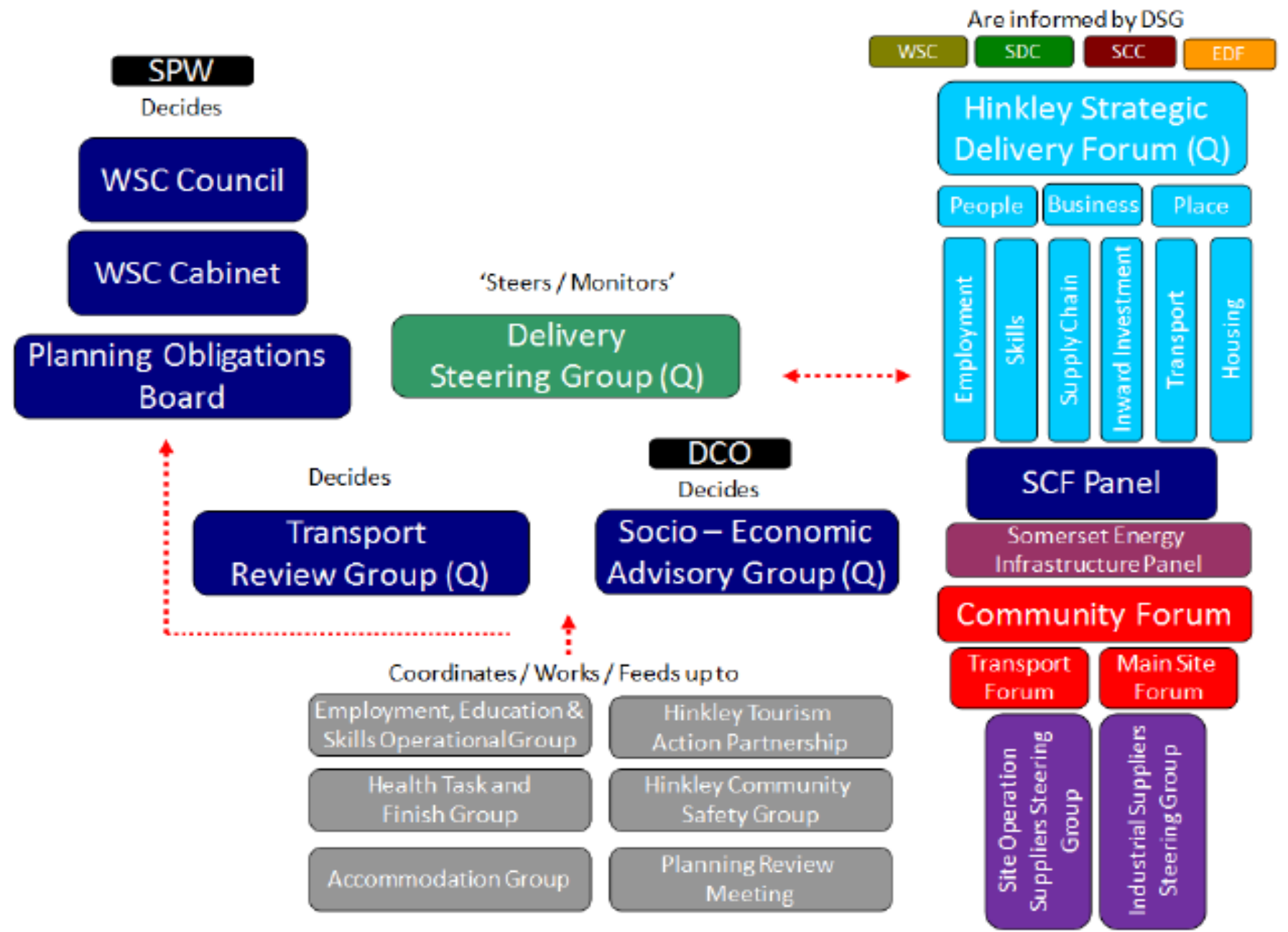
- *Transformational training and education initiatives*
- *HPC Site Campus, with On-Site Medical Centre*
- *Workers Code of Conduct*
- *Whole array of Management Plans*
- *J23 and J24 P&R facilities, and bus links to site*
- *Whole array of funding initiatives*
- *Tourism support*

Negative findings, including:

- *Time delays in commencement of construction project (5 years)*
- *Project modifications*
- *Changes in baseline conditions*
- *Lack of clarity on definition of some indicators*
- *Lack of trigger points in DCO/s106 obligations and requirements*
- *Over-focus on peak construction impacts*
- *Degree of accuracy of some predictive techniques*

Plus challenges of major UK NNB project (with no recent UK comparators)

Somerset LAs' HPC Construction Monitoring Organisational Framework



5. Learning from other NSIPs -- examples

London Olympics

- a detailed and disaggregated assessment of a wide range of both socio-economic and bio-physical environmental impacts

- an independent verification facility, via Commission for Sustainable London

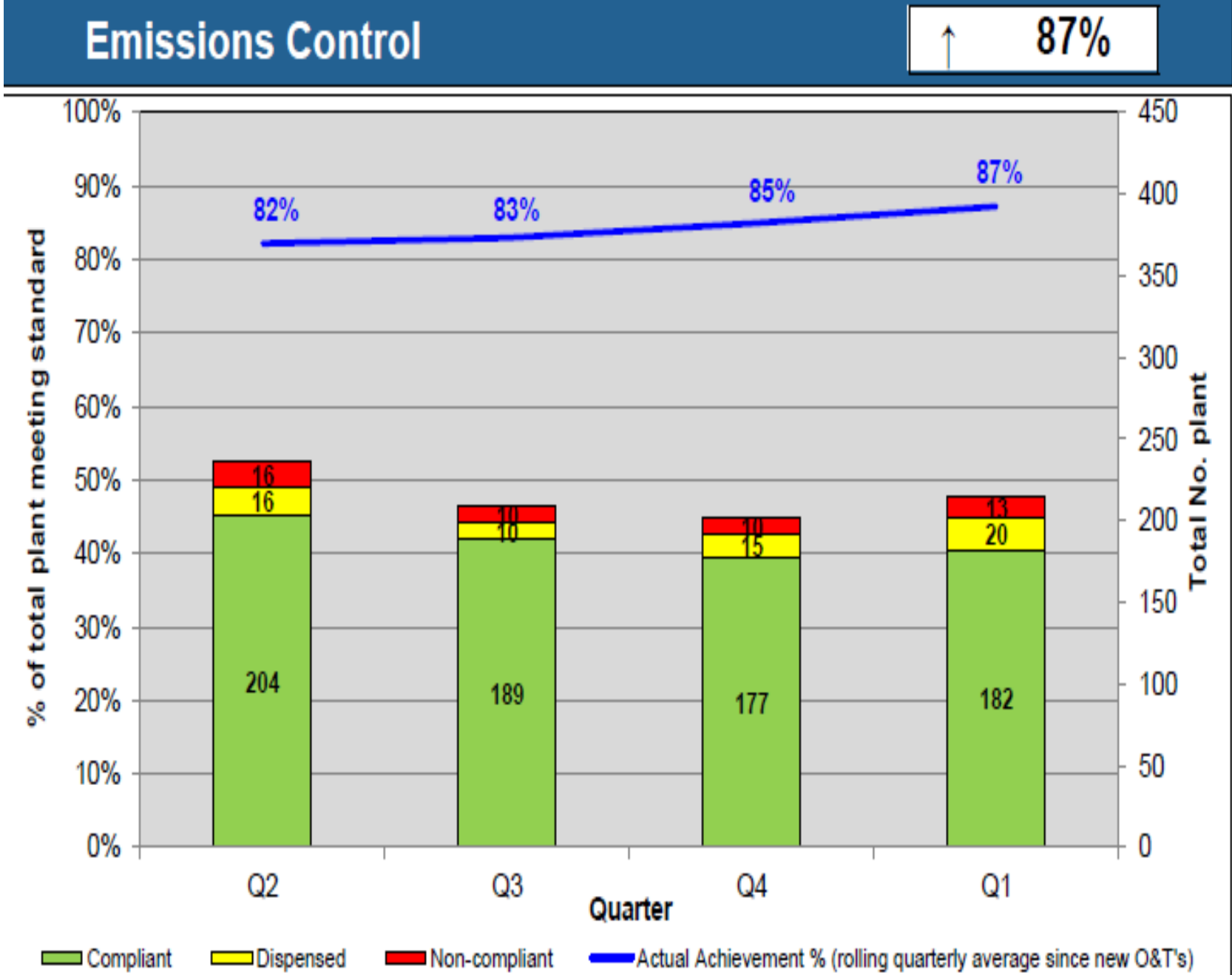
	Olympic Park		Athletes' Village	
Workforce on site	6500	(benchmark)	5400	(benchmark)
% resident in host boroughs	21	--	27	--
% resident elsewhere in London	34	--	40	--
% resident elsewhere in UK	42	--	30	--
% residing outside UK/ or no information	3	--	3	--
% previously unemployed	12	7	10	7
% women	4	11	3	11
% disabled	1	3	0.5	3
% BAME (Black, Asian or Minority Ethnic)	19	15	13	15

Crossrail

a 'Register of Undertakings and Assurances' for the project –81 pages

detailed monitoring information across range of socio-economic and biophysical environmental impacts. For socio-economic data, there are details of contracts greater than £10,000

a Crossrail website reports summary sustainability information with sections on: archaeology; economic sustainability; environmental sustainability; Crossrail innovation programme; Crossrail learning legacy; and health and safety



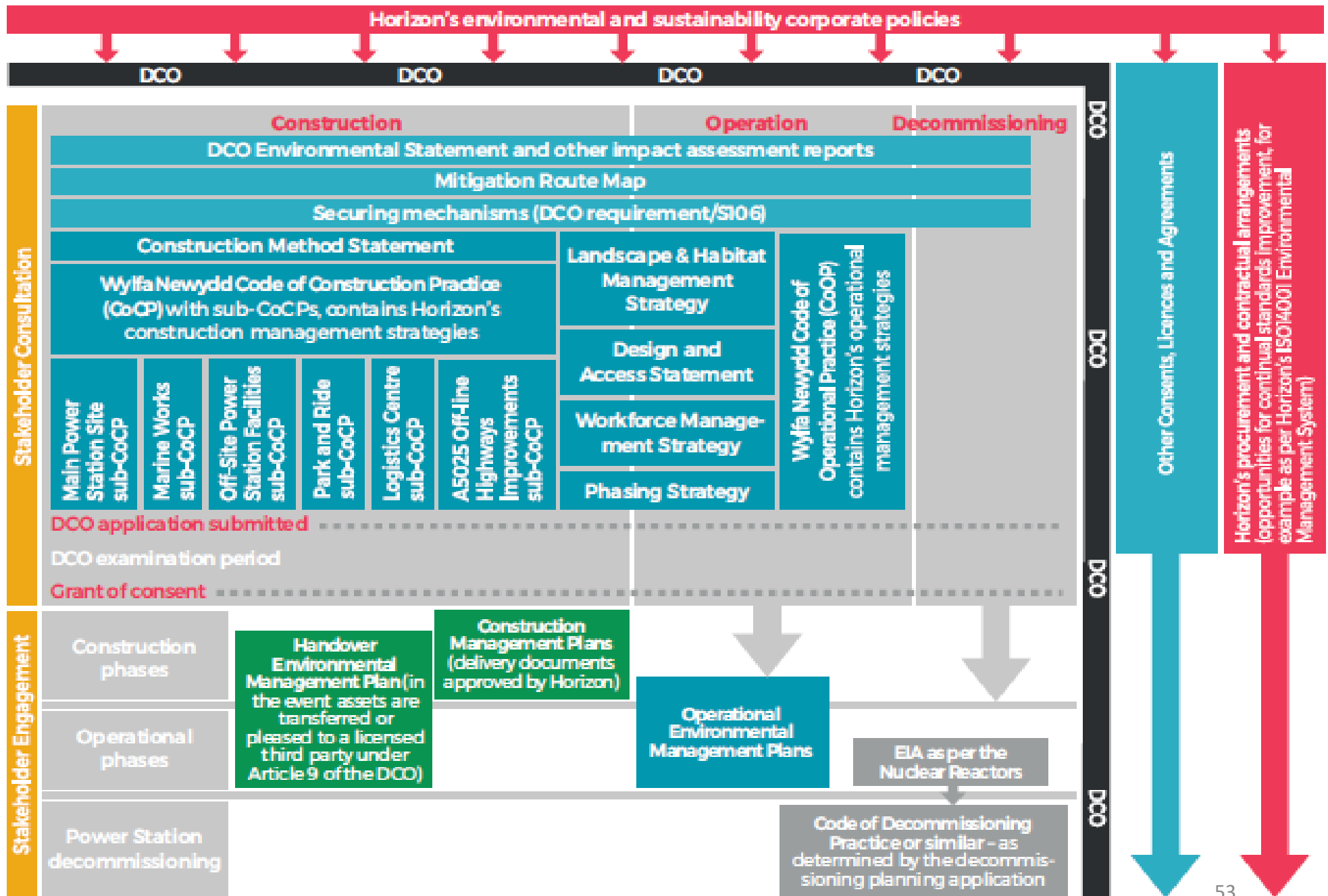
Wylfa

Wylfa Newydd Engagement Framework CoCP (June, 2018)



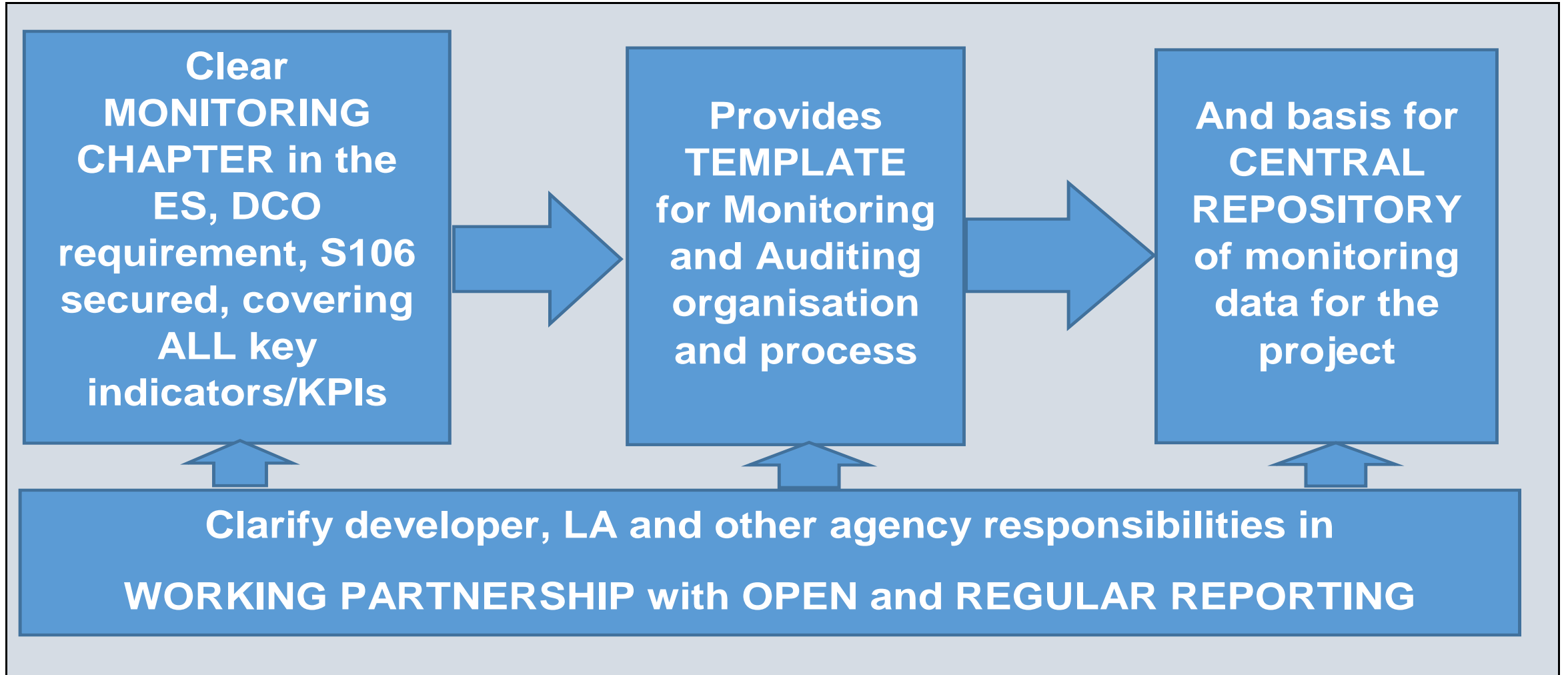
- 3.2.2 Horizon will provide regular reports on monitoring of air quality, noise and water management to the Environment and Built Heritage sub-group; and on traffic to the Transport sub-group.
- 3.2.3 Horizon will provide monitoring in relation to socio-economic impacts through the relevant engagement sub-group identified above, for example, monitoring data from the Workforce Accommodation Management Service (WAMS) will be provided to the Accommodation and Tourism Services sub-group.
- 3.2.4 The engagement sub-groups above will provide information in relation to decisions and actions taken in relation to monitoring activity to the Community Liaison Group (CLG).

Wylfa Newydd
 --summary of codes and management plans and strategies



6. Some generic recommendations for NSIP follow-up

Pre-construction planning and assessment – developer and LAs



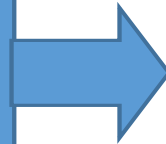
Construction stage – developer and LAs

Monitoring and auditing should be a *planning and implementation activity* with a number of features including:

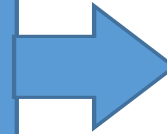
A **MONITORING WEBSITE**, public access, reviewing impacts / reporting concerns

A consistent 3-stage '**event-action-plan approach**' to manage audited impacts

Publicly available
**Annual Impacts
Monitoring and
Auditing
Report—Year 1**



Year 2



Etc

Openness to refresh against a timeline in an **ADAPTIVE IMPACT ASSESSMENT** approach; plus an openness to **INDEPENDENT ANALYSIS AND VERIFICATION**

Pre-construction planning and assessment -- FAO PINS Examiners

- Adopt robust approach in DCO to ***clarify commitments***, and ***establish process of monitoring and public reporting of performance*** against a full set of indicators.
- Ensure clear '***trigger points***' in DCO in relation to completion of associated developments – such as temporary jetty, campus accommodation.
- Ensure predictions contain ***longitudinal timelines***, showing evolution of impacts over key phases of construction stage.
- **Establish agreement on key socio-economic issues**, such as *what is a worker, what is latent accommodation?*
- Recognise opportunities for ***potential legacy benefits*** , including housing (now possible for DCO applications).

Next steps in HPC project impact assessment and management

One of our recommendations:

It should be recognised that some construction impacts may require a refresh against a timeline to review and update baseline conditions, actions and project evolution. This should be part of an effective ***adaptive impact assessment process*** (plan, monitor and manage).

EDFE (November 2019) initiated major refresh of its :

- Peak construction workforce numbers—potential substantial increase
- Accommodation strategy – comprehensive review
- Socio-economic assessment; Amenity and recreation assessment; Health impact assessment ; Community safety management plan – all update

Thankyou for your
attention – questions
please

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