Landscape Institute
Inspiring great places

Changes to the Revised National Policy Statement for Energy Infrastructure

The below briefly summaries and highlights the key changes to the new National Policy Statements for Energy.

The key points are as follows-

A new sub-chapter on Landscape and Visual 5.10 -

Increased scope - the Overarching NPS for Energy (EN-1) has more direct impact as opposed to the previously high level EN-1. It is the primary policy document for decision making where there is no technology-specific NPS, such as carbon capture and storage (CCS), hydrogen and other forms of novel low carbon generation. EN-1 also makes it clear that it will be, in conjunction with any relevant technology specific NPS, the primary policy for the Secretary of State's Nationally Significant Infrastructure Projects (NSIP) decision making on energy infrastructure.

Net Zero compliance - the NPS has been updated to comply with the transition to achieving net zero by 2050 and establish an urgent need for new renewable energy infrastructure.

Offshore wind - substantial changes have been made to the section of EN-3, which deals with offshore wind, to support the delivery of the target of 40GW capacity by 2030 alongside provisions to utilise the technology, policy, scientific evidence and best practice methodologies developed over the past 10 years. In particular, new sections and criteria have been added on marine planning, co-ordinated offshore transmission, environmental compensation, environmental net gain, and the 25-year Environment Plan. The section now also provides greater signalling to industry on considering the need for environmental compensation prior to application and to consider collaborating with others. EN-5 also includes updated guidance on the coordination of onshore and offshore electricity transmission infrastructure associated with offshore wind farms, with particular reference to the ongoing offshore transmission network review (OTNR). It is acknowledged that the NPS may need to be further updated in the future to take account of recommendations from the OTNR.

Assessment principles - greater focus is given to environmental principles, including marine considerations, and new sections have been provided to cover biodiversity net gain, early engagement with stakeholders and good design principles. New sections are also included on the 25-year Environment Plan.

Achieving a diverse generation mix - the need for new coal and oil-fired electricity production has been struck out, and the future generation mix is confirmed with focus on low carbon generation and renewable energy infrastructure, alongside CCS and hydrogen generation. Limited detail has been included on the approach to hydrogen generation (this is stated to be because the government's hydrogen strategy has not yet been published but it was in fact published nearly a month ago). Additionally, the NPS no longer provides

information on onshore wind in recognition of previous changes to the NSIP regime, while new guidance has been included on pumped hydro storage, solar PV and tidal stream energy.

Electricity network infrastructure – reference is made to the need to develop robust electrical infrastructure networks alongside storage and efficient interconnections. Most significant is the change of policy on burying electricity lines. While overhead cable routes are presumed for new electricity lines, in National Parks and AONBs, the strong starting presumption will be that new lines should be underground. Additionally, developers are being encouraged away from reliance on wayleaves, instead being asked to seek to secure permanent land rights wherever possible.

Nuclear: Excluded from the review is the NPS covering nuclear power generation (EN-6). Initial consultation on a review of EN-6 commenced in December 2017 when the government launched a consultation for a new NPS for nuclear power for 2026-2035 and it is expected that this will continue on a separate timeline.

NPS1 Relevant alteration for Biodiversity Net Gain

- The new NPS includes a whole new subchapter (4.5) under chapter 4 of Assessment principles. (Just one page) Titled Environmental and Biodiversity net gain shown below.

Overarching National Policy Statement for Energy (EN-1)

4.5 Environmental and Biodiversity Net Gain

4.5.1 Environmental net gain is an approach to development that aims to leave the natural environment in a measurably better state than beforehand. Applicants should therefore not just look to mitigate direct harms, but also consider whether there are opportunities for enhancements. Biodiversity net gain is an essential component of environmental net gain. Projects should consider and seek to incorporate improvements in natural capital, ecosystem services and the benefits they deliver when planning how to deliver biodiversity net gain.

4.5.2 Although achieving biodiversity net gain is not an obligation for projects under the Planning Act 2008, energy NSIP proposals should seek opportunities to contribute to and enhance the natural environment by providing net gains for biodiversity where possible[59]. Applicants are encouraged to use the most current version of the Defra biodiversity metric[60] to calculate their biodiversity baseline and inform their biodiversity net gain outcomes and to present this data as part of their application. Biodiversity net gain should be applied in conjunction with the mitigation hierarchy and does not change or replace existing environmental obligations.

4.5.3 In addition to delivering biodiversity net gain, developments may also deliver wider environmental gains relevant to the local area, and to national policy priorities, such as reductions in GHG emissions, reduced flood risk, improvements to air or water quality, or increased access to natural greenspace. The scope of potential gains will be dependent on the type, scale, and location of specific projects. Applications for development consent should be accompanied by a statement demonstrating how opportunities for delivering wider environmental net gains have been considered, and where appropriate, incorporated into the design (including any relevant operational aspects) of the project. Applicants should make use of available guidance and tools for measuring natural capital assets and ecosystem services, such as the Natural Capitals Committee's 'How to Do it: natural capital workbook' and Defra's guidance on Enabling a Natural Capital Approach (ENCA). Where environmental net gain considerations have featured as part of the strategic options appraisal process to select a project, the statement should reference that information to supplement the site-specific details.

---

59 Although achieving biodiversity net gain is not currently an obligation on applicants, a proposed amendment to the Environment Bill (see https://bills.parliament.uk/bills/2593/stages/15298/amendments/87948), would mean the Secretary of State may not grant an application for Development Consent Order unless satisfied that a biodiversity gain objective is met in relation to the development to which the application relates. The biodiversity gain objective will be set out in a biodiversity gain statement. Normally these statements will be included within NPS but the amendment allows for the statement to be published separately where a review of an NPS has begun before the proposed amendment comes into force. This would be the case with the energy NPS, should the amendment come into force.
60 The Biodiversity Metric can be found at
http://publications.naturalengland.org.uk/publication/5850908674228224

4.5.4 Part 5 of this NPS provides guidance on the impacts of new energy infrastructure. Opportunities are identified in a number of sections relating to environmental, social and economic enhancements, protection and mitigation measures.

- Chapter 5, section 5.4.4 under Applicants Assessment. A new subsection encouraging proposals to consider Biodiversity Net Gain. Shown below.

5.4.4 The applicant should show how the project has taken advantage of opportunities to conserve and enhance biodiversity and geological conservation interests. As set out in Section 4.6, the design process should embed opportunities for nature inclusive design. The applicant is encouraged to consider how their proposal can contribute towards Biodiversity Net Gain in line with the ambition set out in the 25 Year Environment Plan. Energy infrastructure projects have the potential to deliver significant benefits and enhancements beyond Biodiversity Net Gain, which result in

84 Government Circular: Biodiversity and Geological Conservation – Statutory Obligations and their Impact within the Planning System (ODPM 06/2005, Defra 01/2005) available via TSO website www.tso.co.uk/bookshop. It should be noted that this document does not cover more recent legislative requirements, such as the Marine Strategy Regulations 2010.
85 The MHCLG Natural Environment Guidance can be found at https://www.gov.uk/guidance/natural-environment

wider environmental gains. The scope of potential gains will be dependent on the type, scale, and location of each project.

- Addition to Biodiversity within Developments subsection 5.4.14- Development proposals should have opportunities to benefit biodiversity in order to improve Biodiversity Net Gain.

Biodiversity within Developments

5.4.14 Development proposals provide many opportunities for building-in beneficial biodiversity or geological features as part of good design. When considering proposals, the Secretary of State should maximise such opportunities in and around developments, using requirements or planning obligations where appropriate. This can help towards delivering biodiversity net gain. Wider ecosystem services and benefits of natural capital should also be considered when designing enhancement measures.

- Subsection 5.4.22- Any habitat creation or enhancement delivered for biodiversity net gain should generally be maintained for a minimum period of 30 years.

5.4.22 The Secretary of State should consider what appropriate requirements should be attached to any consent and/or in any planning obligations entered into, in order to ensure that any mitigation or biodiversity net gain measures, if offered, are delivered and maintained. Any habitat creation or enhancement delivered for biodiversity net gain should generally be maintained for a minimum period of 30 years.

NPS1 Relevant alteration for Landscape

- A new sub-chapter on Landscape and Visual 5.10

This Sub-Chapter highlights the visual effects on the landscape that energy projects will have on the landscape.

5.10 Landscape and Visual

Introduction

5.10.1 The landscape and visual effects of energy projects will vary on a case by case basis according to the type of development, its location and the landscape setting of the proposed development. In this context, references to landscape should be taken as covering seascape and townscape where appropriate.

110 Guidance on the contents of a written scheme of investigation is set out in Historic Environment Good Practice Advice in Planning: 2 – Managing Significance in Decision-Taking in the Historic Environment https://historicengland.org.uk/images-books/publications/gpa2-managing-significance-in-decision-taking/ or any successor documents.

5.10.2 Among the features of energy infrastructure which are common to a number of different technologies, cooling towers and exhaust stacks and their plumes have the most obvious impact on landscape and visual amenity for thermal combustion generating stations.[111] Some natural draught cooling towers may be up 200 metres, although this would be exceptional. Visual impacts may be not just the physical structures but also visible steam plumes from cooling towers.

5.10.3 Other types of cooling system, for example direct throughput where water is abstracted, used for cooling then returned to source, or air-cooled condensers, will have less visible impacts as the structures are considerably lower than natural draught cooling towers and exhibit no visible steam plumes. Further, modern hybrid cooling systems – for example mechanical draught – do not generally exhibit visible steam plumes except in exceptional adverse weather conditions. These systems are normally considered as the "Best Available Techniques" (BAT). However there may be losses of electricity output owing to the need for energy to operate hybrid cooling or air-cooled condenser systems.

5.10.4 When considering visual impacts of thermal combustion generating stations, the Secretary of State should presume that the adverse impacts would be less if a hybrid or direct cooling system is used and that applicants will use BAT. The Secretary of State should therefore expect the applicant to justify BAT for the use of a cooling system that involves visible steam plumes or has a high visible structure, such as a natural draught cooling tower. The Secretary of State should be satisfied that the application of modern hybrid cooling technology or other technologies is not reasonably practicable before giving consent to a development with natural draught cooling towers.

- Sub-Chapter 4.6- The newly added Criteria for "Good Design" for Energy Infrastructure

- Highlights the importance of buildings "fitness for purpose and sustainability". This is what "Good Design refers to".
- Applying this "Good Design" to energy projects should produce sustainable infrastructure

4.6 Criteria for "Good Design" for Energy Infrastructure

4.6.1 The visual appearance of a building, structure, or piece of infrastructure, and how it relates to the landscape it sits within, is sometimes considered to be the most important factor in good design. But high quality and inclusive design goes far beyond aesthetic considerations. The functionality of an object - be it a building or other type of infrastructure - including fitness for purpose and sustainability, is equally important. Applying "good design" to energy projects should produce sustainable infrastructure sensitive to place, efficient in the use of natural resources and energy used in their construction and operation, matched by an appearance that demonstrates good aesthetic as far as possible. It is acknowledged, however that the nature of much energy infrastructure development will often limit the extent to which it can contribute to the enhancement of the quality of the area.

4.6.2 Good design is also a means by which many policy objectives in the NPS can be met, for example the impact sections show how good design, in terms of siting and use of appropriate technologies, can help mitigate adverse impacts such as noise. Given the benefits of "good design" in mitigating the adverse impacts of a project, applicants should consider how "good design" can be applied to a project during the early stages of the project lifecycle. Design principles[61] should be established from the outset of the project to guide the development from conception to operation.

4.6.3 In the light of the above and given the importance which the Planning Act 2008 places on good design and sustainability, the Secretary of State needs to be satisfied that energy infrastructure developments are sustainable and, having regard to regulatory and other constraints, are as attractive, durable, and adaptable (including taking account of natural hazards such as flooding) as they can be. In doing so, the Secretary of State should be satisfied that the applicant has taken into account both functionality (including fitness for purpose and sustainability) and aesthetics (including its contribution to the quality of the area in which it would be located, any potential amenity benefits, and visual impacts on the landscape or seascape) as far as possible. Whilst the applicant may not have any or very limited choice in the physical appearance of some energy infrastructure, there may be opportunities for the applicant to demonstrate good design in terms of siting relative to existing landscape character, land form and vegetation. Furthermore, the design and sensitive use of materials in any associated development such as electricity substations will assist in ensuring that such development contributes to the quality of the area. Applicants should also, so far as is possible, seek to embed opportunities for nature inclusive design within the design process.

61 Design principles should take into account any national guidance on infrastructure design, this could include for example the Design Principles for National Infrastructure published by the National Infrastructure Commission. https://nic.org.uk/studies-reports/design-principles-for-national-infrastructure/

4.6.4 For the Secretary of State to consider the proposal for a project, applicants should be able to demonstrate in their application documents, how the design process was conducted and how the proposed design evolved. Where a number of different designs were considered, applicants should set out the reasons why the favoured choice has been selected. In considering applications, the Secretary of State should take into account the ultimate purpose of the infrastructure and bear in mind the operational, safety and security requirements which the design has to satisfy. Many of the wider impacts of a development, such as landscape and environmental impacts, will be important factors in the design process. The Secretary of State will consider such impacts under the relevant policies in this NPS. Assessment of impacts must be for the stated design life of the scheme rather than a shorter time period.

4.6.5 Applicants and the Secretary of State should consider taking independent professional advice on the design aspects of a proposal. In particular, the Design Council can be asked to provide design review for nationally significant infrastructure projects and applicants are encouraged to use this service.[62]

4.6.6 Further advice on what the Secretary of State should expect applicants to demonstrate by way of good design is provided in the technology specific NPSs where relevant.

Under subchapter 5.11- Land Use, Including Open Space, Green Infrastructure, and Green Belt- There is an addition to what the government policy must ensure in regards to open green spaces particularly in urban spaces. As highlighted below

5.11 Land Use, Including Open Space, Green Infrastructure, and Green Belt

Introduction

5.11.1 An energy infrastructure project will have direct effects on the existing use of the proposed site and may have indirect effects on the use, or planned use, of land in the vicinity for other types of development. Given the likely locations of energy infrastructure projects there may be particular effects on open space[117] including green infrastructure[118].

5.11.2 The government's policy is to ensure there is adequate provision of high quality open space (including green infrastructure) and sports and recreation facilities to meet the needs of local communities. Open spaces, sports and recreational facilities all help to underpin people's quality of life and have a vital role to play in promoting healthy living. Well designed and managed green infrastructure in particular, provides multiple benefits at a range of scales. It can contribute to health, wellbeing, biodiversity recovery, absorb surface water, cleanse pollutants and absorb noise and reduce high temperatures. It will also play an increasingly important role in mitigating or adapting to the impacts of climate change. The provision and enhancement of green infrastructure can improve air quality, particularly in urban areas. Applicants are therefore encouraged to consider how new green infrastructure can be provided, or how existing green infrastructure can be enhanced, as part of their application.

NPS-2- General Changes

The Document title has changed from that of *National Policy Statement* ***for Fossil Fuel*** *Electricity Generating Infrastructure* to *National Policy Statement* ***for Natural Gas*** *Electricity Generating Infrastructure.*

Introduction 1.1

- Has changed to highlight the continuation of hydrogen/ carbon capture programmes and explains natural gas will continue to play a role in that.

Sub-chapter 2.4- Impacts of Natural Gas generating stations

Similar to the previous NPS however, explains that the existence of natural gas generating stations are likely to impact policy on Landscapes and Visual Impacts.

2.4 Impacts of natural gas generating stations

Introduction

2.4.1 Part 5 of EN-1 contains policy for the Secretary of State when assessing potential impacts of energy infrastructure projects (identified as 'generic impacts'). It also contains information to assist the interpretation of the impact sections of all of the energy NPSs (see Section 5.1). When considering impacts for natural gas electricity generating stations, all of the generic impacts covered in EN-1 are likely to be relevant. This NPS has additional policy on:

- Air emissions
- Landscape and visual impacts
- Noise and vibration
- Water quality and resources

2.4.2 The impacts identified in Part 5 of EN-1 and this NPS are not intended to be exhaustive. Applicants are required to assess all likely significant effects of their proposals (see Section 4.2 of EN-1) and the Secretary of State should therefore consider any impacts which it determines are relevant and important to its decision.

2.6 Landscape and Visual

Report emphasises that the secretary of state should be considerate of the impacts natural gas plants may have on the Landscape, in particular areas of natural beauty. This is different from the old emphasis just on Fossil Fuels.

2.6 Landscape and visual

Introduction

2.6.1 Generic landscape and visual impacts are covered in detail in EN-1, Section 5.10. When considering landscape and visual impacts, the Secretary of State should have particular regard to the impacts on National Parks, the Broads and Areas of Outstanding Natural Beauty as set out in EN-1. In addition to the impacts described in EN-1, there are specific considerations which apply to natural gas generating stations as set out below.

2.6.2 The main structures for a natural gas generating station, including the turbine and boiler halls, exhaust gas stacks, storage facilities, cooling towers, and water processing plant, are large. They will have an impact on the surrounding landscape and visual amenity. The overall size of the development will inevitably be dependent on technology and design. Night-time lighting for continuous operation will also have an impact on visual amenity.

NPS- 3- Renewable Energy Infrastructure

This document has grown significantly in size with over 30 more pages and 2449 changes.

2.33.18 Environmental Net Gain- New sub-section

Very relevant for the LI- Mentions a new 25 year environmental plan.

Environmental net gain

2.23.18 Environmental net gain is an approach to development that aims to leave the natural environment in a measurably better state than beforehand. Biodiversity net gain is an essential component of environmental net gain. Projects should consider and seek to incorporate improvements in natural capital, ecosystem services and the benefits they deliver when planning how to deliver biodiversity net gain. Biodiversity net gain is addressed in Section 4.5 of EN-1. The applicant should demonstrate that they have considered how their proposal can contribute towards biodiversity net gain in line with the ambition set out in the 25 Year Environment Plan.

Note: this section details how the plans are to build windfarms off-shore meaning less of an impact onshore.

25 Year Environmental Plan

New inclusions of the 25 YEP included in

Mitigation

2.50.10 Proposed enhancements should take account of the above factors and as set out in Section 5.4 of EN1 and aim to achieve environmental and biodiversity net gain in line with the ambition set out in the 25 Year Environment Plan. This might include maintaining or extending existing habitats and potentially creating new important habitats, for example by instating: cultivated strips/plots for rare arable plants, rough grassland margins, bumble bee plant mixes, and wild bird seed mixes. It is advised that an ecological monitoring programme is developed to monitor impacts upon the flora of the site and upon any particular ecological receptors (e.g., bats and wintering birds). Results of the monitoring will then inform any changes needed to the land management of the site, including, if appropriate, any livestock grazing regime.

Pumped Hydro Storage- 2.36.

A new sub-chapter, Pumped Hydro Storage (PHS) used for the storage of electricity rather than the generation- Helps decarbonise the electricity system by making electricity supply more renewable and providing greater flexibility to demand. The problem here for members is the impact that it has on local landscapes; info on that in sub-section 2.36.4 below. Key areas, mountains/ hilly areas. Shown below.

Pumped Hydro Storage

2.36 Pumped hydro storage: introduction

2.36.1 Pumped hydro storage (PHS) uses the difference in height between two reservoirs or other bodies of water to store energy. By transferring water from the upper reservoir to the lower reservoir through a turbine, power can be generated. Later, the water must then be pumped back to the upper reservoir using power from the grid or elsewhere.

2.36.2 This section of EN-3 refers specifically to PHS, not hydroelectric power generation (for example where the upper reservoir is filled naturally from a watercourse or rainfall, or a run-of-the-river scheme). No applications for hydroelectric power generation NSIPs are expected, but if such an application is made then the information in this section may be relevant.

2.36.3 Unlike hydroelectric power generation, PHS is not a net generator of electricity: any power generation must subsequently be balanced by consumption to return the water to the upper reservoir. However, the storage capability is useful to the electricity grid as it helps to correct for imbalances in electricity supply and demand, as well as providing a range of other services to the grid, including inertia. In general, PHS is likely to consume electricity when there is excess renewable generation on the system, and generate electricity when renewable electricity is scarce. This helps to decarbonise the energy system by integrating more renewable electricity and providing greater flexibility.

2.36.4 PHS can have significant impacts on local landscape, including: flooding of land to form the reservoirs; construction of a dam to artificially hold back large volumes of water; and significant infrastructure including pipework, turbine and pumping stations, electricity transmission lines and vehicular access. PHS is most likely to be located in mountainous or hilly locations, and less likely to be situated in lowland areas.

Secretary of State decision making

2.42.4 PHS schemes have the potential to have significant impacts on the landscape, which may include:

- construction of a substantial concrete dam (potentially several hundred metres in length, depending on the scale of the PHS scheme)
- construction of the generating station (requiring a building in excess of 25m in height)
- substantial civil works for the scheme foundations and to dig the reservoir(s), generating significant amounts of spoil
- flooding of land to create the reservoir(s) (potentially covering an area of several hundred square metres)

2.42.5 Good design that contributes positively to the character and quality of the area will go some way to mitigate adverse landscape/visual effects. Development proposals should consider the design of the dam and generating station, including the materials to be used in the context of the local landscape.

2.42.6 Construction of PHS schemes has the potential to generate large amounts of spoil, from the digging of foundations and the reservoirs themselves. If these spoil heaps are to be kept within the locality, they should be located in a way that minimises their visual impact. The safety and stability of the heaps will also need to be continually managed.

2.42.7 Mitigation is achieved primarily through aesthetic aspects of site layout and building design including size and external finish and colour of the infrastructure to minimise intrusive appearance in the landscape as far as engineering requirements permit. In some cases it may be possible to house some of the station, including the generation station, underground or inside the dam. The precise architectural treatment will need to be site-specific.

2.42.8 The Secretary of State should expect applicants to seek to landscape PHS sites to visually enclose them at a low level as seen from surrounding external viewpoints. This makes the scale of the scheme less apparent, and helps conceal its lower level, smaller scale features. Earth bunds and mounds, tree planting or both may be used for softening the visual intrusion and may also help to attenuate noise from site activities.

Limited relevance to members however 2.45 Pumped hydro storage has a new impacts section on biodiversity shown here.

2.45 Pumped hydro storage impacts: biodiversity

Introduction

2.45.1 Generic biodiversity impacts are set out in Section 5.4 of EN-1. The design and construction of PHS schemes will have additional impacts on biodiversity. These may include:

- habitat loss resulting from flooding of land and/or clearing of vegetation
- soil removal for infrastructure causing alterations to landscape hydrology
- compromised water quality impacting aquatic flora and fauna, as described in 2.44.1

Applicant's assessment

2.45.2 Where the project is likely to have effects on biodiversity the applicant should undertake an assessment as required in EN-1, Section 5.4. The assessment is likely to need to take account of the ecological status of the water environment.

Mitigation

2.45.3 The mitigation measures set out in EN-1 should be followed. Additionally, it should be noted that PHS schemes can also provide benefits to local biodiversity, including through habitat creation and/or enhancement, fish re-stocking, and bankside planting. Some turbines may assist in increasing dissolved oxygen levels.

Secretary of State decision making

2.45.4 The Secretary of State should be satisfied that the applicant has demonstrated measures to minimise adverse impacts on biodiversity as described above and in EN-1.

2.51 Solar photovoltaic generation impacts: landscape, visual and residential amenity

On top on the generic impacts discussed in 5.10 and the PHS, this is the other onshore energy production plan that will impact the landscape. Impacts will fall on landscapes on low lying areas.

2.51 Solar photovoltaic generation impacts: landscape, visual and residential amenity

Introduction

2.51.1 Generic landscape and visual impacts are covered in Section 5.10 of EN-1. In addition, there are specific considerations which apply to solar panels, which are set out in the following paragraphs.

2.51.2 The approach to assessing cumulative landscape and visual impact of large-scale solar farms is likely to be the same as assessing other onshore energy infrastructure. Solar farms are likely to be in low lying areas of good exposure and as such may have a wider zone of visual influence than other types of onshore energy infrastructure. However, whilst it may be the case that the development covers a significant surface area, in the case of ground-mounted solar panels it should be noted that with effective screening and appropriate land topography the area of a zone of visual influence could be zero.

Applicant's assessment

2.51.3 The applicant should carry out a landscape and visual assessment and report it in the ES. Visualisations may be required to demonstrate the effects of a proposed solar farm on the setting of heritage assets and any nearby residential areas or viewpoints.

2.51.4 Applicants should follow the criteria for good design set out in Section 4.6 of EN-1 when developing projects and will be expected to direct considerable effort towards minimising the landscape/visual impact of solar PV arrays. Whilst there is an acknowledged need to ensure solar PV installations are adequately secured, required security measures such as fencing should consider the need to minimise the impact on the landscape and visual impact.

2.51.5 The applicant should have regard in both the design layout of the solar farm, and future maintenance plans, to the retention of growth of vegetation on boundaries, including the opportunity for individual trees within the boundaries to grow on to maturity. The landscape and visual impact should be considered carefully at the pre-application stage. Existing hedges and established vegetation, including mature trees, should be retained wherever possible. Trees and hedges should be protected during construction. The impact of the proposed development on established trees and hedges should be informed by a tree survey or a hedge assessment as appropriate.

tigation

2.51.6 Applicants should consider the potential to mitigate landscape and visual impacts through, for example, screening with native hedges. Efforts should be made to minimise the use and height of security fencing. Where possible projects should utilise existing features, such as hedges or landscaping, to screen security fencing and use natural features, such as vegetation planting, to assist in site security. Projects should minimise the use of security lighting. Any lighting should utilise a passive infra-red (PIR) technology and should be designed and installed in a manner which minimises impact.

ɛcretary of State decision making

2.51.7 The Secretary of State will consider visual impact of any proposed solar PV farm, taking account of any sensitive visual receptors, and the effect of the development on landscape character, together with the possible cumulative effect with any existing or proposed development.

Solar photovoltaic generation (SPG) will have impacts on construction including traffic and transport noise and vibration (2.54) Shown below.

2.54 Solar photovoltaic generation impacts: construction including traffic and transport noise and vibration

Introduction

2.54.1 Generic traffic and transport impacts are covered in EN-1, Section 5.14. In addition, there are specific considerations which apply to solar farms as set out below. Public perception of the construction phase of solar farm will derive mainly from the effects of traffic movements.

2.54.2 Many solar farms will be sited in areas served by a minor road network. Modern solar farms are large sites that are mainly comprised of small structures that can be transported separately and constructed on-site. It is likely that applicants will designate a construction compound on-site for the delivery and assemblage of the necessary components. Traffic is likely to involve smaller vehicles than typical onshore energy infrastructure but may be more voluminous. It is important that all sections of roads and bridges on the proposed delivery route can accommodate the weight and volume of the loads.