

Chelmsford Local Plan

Solar Farm Development Supplementary Planning Document

November 2021



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I - Introduction

I.1 Renewables now account for over one third of UK electricity generation, up from seven per cent in 2010, driven by the deployment of wind, solar and biomass. Electricity demand is predicted to double in the UK by 2050, driven in part by the electrification of vehicles and the increased use of clean electricity replacing gas for heating. The Government have also committed to closing all coal fired power stations no later than 2025. As a result, electricity could provide more than half of final energy demand in 2050, up from 17% in 2019. This would require a four-fold increase in clean electricity generation with the decarbonisation of electricity increasingly underpinning the delivery of the Government's target to cut greenhouse gas emissions (compared to 1990 levels) in the UK by 100% by 2050 ⁽¹⁾.

I.2 The Government expects future low-cost, net zero consistent electricity to be made up of predominantly onshore and offshore wind and solar, complemented by technologies which provide power, or reduce demand, when the wind is not blowing, or the sun does not shine, including nuclear, clean hydrogen and long-duration storage ⁽²⁾. The Government's 'Energy White Paper – Powering our Net Zero Future' published in December 2020 states that sustained growth in the capacity of solar and onshore and offshore wind will be needed in the next decade to ensure the country is on the path to a low-cost, clean electricity system by 2050.

I.3 The Climate Change Committee, the UK Government's independent advisor on emissions targets and climate change, published their 'The Sixth Carbon Budget: The UK's path to Net Zero' in December 2020. This sets out the actions the UK will need to take to achieve net-zero emissions by 2050. The report highlights that a portfolio of zero and low-carbon energy generating technologies will be needed to meet future electricity demands including expanding new solar generating technology capacity by 3,000MW on average every year to 2030 and beyond.

1 Energy White Paper – Powering our Net Zero Future, HM Government December 2020

2 Energy White Paper – Powering our Net Zero Future, HM Government December 2020



2- Principle of Major Solar Energy

2.1 The Council's Climate and Ecological Emergency Declaration in July 2019 seeks to focus attention on reducing carbon and greenhouse gas emissions in the area and to plan for a more sustainable future. CCC recognises that solar energy development can help meet targets for reducing carbon emissions, reduce reliance on fossil fuels and provide local energy security. They can also contribute to sustainable agriculture providing an income stream for farmers and landowners, provide benefits to local ecosystems and wildlife and support local employment opportunities. CCC supports the principle of solar energy development provided the environmental impacts can be appropriately managed through the planning application process.

Figure 1 Mounted Solar Panels (Source: Ulrich Dregler from Pixabay)





3- Purpose of this Supplementary Planning Document

3.1 This Supplementary Planning Document (SPD) provides guidance on:

- National planning policy and guidance and local planning policy relevant to major stand-alone ground mounted solar PV modules (or “solar farm”) developments
- Local guidance on preparing and submitting planning proposals for solar farm proposals and how planning applications will be considered in light of national and local policy requirements
- How solar farm developments should be assessed including issues such as landscape sensitivity, heritage, glint and glare, residential amenity, traffic, and biodiversity, and how impacts should be mitigated
- An overview of the standards required for solar farm developments proposed in Chelmsford to help ensure that the local area and communities are able to benefit as much as possible from solar farm development in Chelmsford
- Advice on Environmental Impact Assessments (EIA) and undertaking community consultation
- Practical information on studies and supporting information to be submitted alongside planning proposals, and
- An overview of locations considered to be preferred areas of search for solar farm proposals and the locations considered to be unsuitable or highly sensitive for solar farm development in Chelmsford.

3.2 Major solar farm proposals are those with a site area of 1 hectare or above, as defined in the Town and Country Planning (Development Management Procedure) England Order 2010. All solar farm planning applications of less than 50MW in CCC’s administrative area would be determined by the Council. Larger scale solar farms of 50MW or greater are considered as a ‘Nationally Significant Infrastructure Project’ and are determined by the Secretary of State for Business, Energy & Industrial Strategy through a Development Consent Order once the Planning Inspectorate has conducted an examination and made a recommendation.

3.3 By law, planning applications must be determined in accordance with the development plan unless there are material considerations that indicate otherwise (section 38(6) of the Planning and Compulsory Purchase Act 2002). Provided regard is had to all material considerations, it is for the decision maker to decide what weight is to be given to the material considerations in each case, and (subject to the test of reasonableness) the courts will not get involved. This SPD builds upon and provides more detailed advice or guidance on relevant policies in the Local Plan and is a material consideration in the determination of solar farm planning applications in the Council’s area. It is intended to be used by, among others, solar farm applicants, Council planners, local stakeholders, and communities. The Council is consulted by the Planning Inspectorate on Nationally Significant Infrastructure Projects (NSIP) in its area and will use this SPD to help determine its response. This SPD also supports the implementation of renewable energy policies in the Chelmsford Local Plan 2013-2036 and the Council’s Climate and Ecological Emergency Action Plan, published in January 2020.



3.4 This guidance does not identify any preferred sites for solar farm development or cover planning advice for smaller building mounted solar energy systems which is provided in the Making Places SPD.

3.5 Chelmsford City Council (CCC) strongly encourages applicants to engage early with the Council and to seek pre-application advice ahead of submitting a planning application or Development Consent Order for a solar farm. Further information on how to access pre-application advice can be found at [Request planning advice - Chelmsford City Council](#). The Council will seek a Planning Performance Agreement (PPA) with the applicants of Nationally Significant Infrastructure solar farm projects to enable it to provide effective and timely planning advice throughout the Development Consent Order process. In appropriate cases, a PPA may be sought as part of a planning application. Details will be confirmed with the applicant as part of the pre-application process.

3.6 Pre-application advice should also be sought from Essex County Council (ECC) statutory roles as highway and transport authority; Minerals and Waste Planning Authority (MWPA); Lead Local Flood Authority (LLFA); and lead advisors on public health. ECC also provides pre-application advice on other community infrastructure matters, including education. Further information, including charges is available at [Planning Advice Guidance \(essex.gov.uk\)](#). In addition, ECC has produced a model PPA to outline the offer and to assist partners in this process. Charges for community infrastructure enquiries are also detailed in the ECC Developer's Guide to Infrastructure Contributions.



4- Status

4.1 A draft of this Solar Farm Development SPD was published for four weeks public consultation from 18 May to 15 June 2021. Feedback received was used to inform this final adopted version of the SPD.

Figure 2 View of Solar Arrays (Source: AB27 from Pixabay)





5- Policy Context

5.1 Proposals for the development of solar farms will be assessed against relevant national and local planning policies, including National Planning Policy Statements (NPS), National Planning Policy Framework (NPPF), National Planning Practice Guidance (NPPG) and the statutory Development Plans for CCC's area.

5.2 The emerging Environment Bill is expected to put the 25-year Environment Plan into law and create a statutory framework for environmental principles. The Bill is expected to include ambitious legislative measures to take direct action to address environmental priorities including biodiversity net gain, restoration and enhancement of nature, improving air quality, tackling climate change, waste and resource efficiency, and water resource management to enable the government to be taking account on its commitment to reach net zero emissions by 2050.

National Policy

5.3 The overarching National Policy Statement for Energy (NPS EN-1) and National Policy Statement for Renewable Energy Infrastructure (NPS EN-3) set out national policy for the delivery of nationally significant energy infrastructure, including renewable energy although neither explicitly covers solar powered electricity generation or battery storage. The NPS's set out assessment principles for judging impacts of energy projects and are material considerations when considering development proposals. The National Policy Statement for Electricity Networks Infrastructure (NPS EN-5) may also be relevant where new overhead electricity lines and associated infrastructure are proposed.

5.4 The NPPF talks generally about renewables within the context of planning for climate change and makes no specific reference to solar farms. It favours sustainable energy systems as long as any impacts are (or can be) made acceptable, and that local planning authorities should approach these as part of a positive strategy for tackling climate change. The NPPF, paragraph 158 states that when determining planning applications for renewable and low carbon development, local planning authorities should:

- a) not require applicants to demonstrate the overall need for renewable or low carbon energy, and recognise that even small-scale projects provide a valuable contribution to cutting greenhouse gas emissions; and
- b) approve the application if its impacts are (or can be made) acceptable. Once suitable areas for renewable and low carbon energy have been identified in plans, local planning authorities should expect subsequent applications for commercial scale projects outside these areas to demonstrate that the proposed location meets the criteria used in identifying suitable areas.



5.5 The NPPF, paragraph 151 outlines that many renewable energy projects will comprise inappropriate development in the Green Belt. As such, applicants of solar farms in the Green Belt would need to demonstrate very special circumstances in order to be approved. The NPPF states that such very special circumstances may include the wider environmental benefits associated with increased production of energy from renewable sources.

5.6 The NPPG outlines guidance on the specific planning considerations that relate to large scale ground-mounted solar PV farms. It states that one consideration amongst others should be whether land is being used effectively; recommending that large scale solar farms are focused on previously developed and non-agricultural land.

Local Planning Policy

5.7 When assessing a planning application for a solar farm the Council will also assess the proposal against relevant adopted local planning policies and guidance. These include:

- Chelmsford Local Plan 2013-2036, May 2020
- Essex County Council and Southend-on-Sea Waste Local Plan, 2017
- Essex County Council Minerals Local Plan, July 2014
- Neighbourhood Plans that have passed referendum
- Making Places Supplementary Planning Document (SPD), January 2021
- Planning Obligations SPD, January 2021
- Draft South East Inshore Marine Plan, 2020

5.8 This SPD provides guidance on the implementation for the following policies in the Chelmsford Local Plan:

- Strategic Policy S2 – Addressing climate change and flood risk

5.9 This sets out policy requirements for mitigating and adapting to climate change. In addressing the move to a lower carbon future for Chelmsford, the Council will, amongst other considerations, encourage new development that provides opportunities for renewable and low carbon energy technologies and schemes and provides opportunities for green infrastructure including city greening, and new habitat creation.



- Policy DM19 – Renewable and low carbon energy

5.10 This sets out policy requirements for renewable or low carbon energy developments. The Council will support renewable or low carbon energy developments that do not cause demonstrable harm to residential living environment; avoid or minimise impacts on the historic environment; can demonstrate no adverse effect on the natural environment including designated sites; do not have an unacceptable visual impact which would be harmful to the character of the area; and will not have a detrimental impact on highway safety. Where located within the Green Belt, renewable or low carbon energy developments will also need to demonstrate very special circumstances in order to be approved.

5.11 It is also relevant to a number of other local plans policies including:

- Strategic Policy S3 – Conserving and Enhancing the Historic Environment
- Strategic Policy S4 – Conserving and Enhancing the Natural Environment
- Strategic Policy S11 – The Role of the Countryside
- Policy DM7 – New buildings and structures in the green wedge
- Policy DM16 – Ecology and biodiversity

5.12 The Essex County Council and Southend-on-Sea Waste Local Plan (WLP) and Essex County Council Minerals Local Plan (MLP) set out the policy framework within which minerals and waste planning applications are assessed. They also contain policies which safeguard known mineral bearing land from sterilisation (Policy S8) through mineral safeguarded areas on all sites of 5ha or more for sand and gravel, 3ha or more for chalk and greater than 1 dwelling for brickearth or brick clay. The WLP and MLP also establish consultation areas within 250 metres of existing, permitted and allocated mineral and waste infrastructure to ensure the authority is consulted upon regarding any nearby development which may compromise their operation (Policy S8 and Policy S2 respectively).



6- Environmental Impact Assessment (EIA)

6.1 Solar farms and their associated development fall under Schedule 2 to the Environmental Impact Assessment (EIA) Regulations 1999 and apply to sites over 0.5 hectares. Applicants are advised to apply to CCC for an EIA Screening Opinion Request before submitting a planning application. If a development is considered to require an EIA, further advice can be requested by submitting an EIA Scoping Opinion. In the case of a Development Consent Order applications, Screening and Scoping Opinions should be requested from the Planning Inspectorate.

Figure 3 Solar Arrays (Source: ThePictureBox from Pixabay)





7- Guidance on Submitting Planning Applications

7.1 The following key planning considerations should be taken into account by applicants when preparing, designing and submitting development proposals for a solar farm development within Chelmsford. This includes associated infrastructure and buildings, such as substations, transformers, battery storage facilities, power cables, fencing, access tracks, construction compounds, and connection to the National Grid. It also provides details of studies and supporting information to be submitted alongside planning proposals. The exact content and form of the supporting documents will depend on the specific proposal which can be agreed at the pre-application stage as encouraged in paragraph 3.5.

Agricultural Land Classification (ALC)

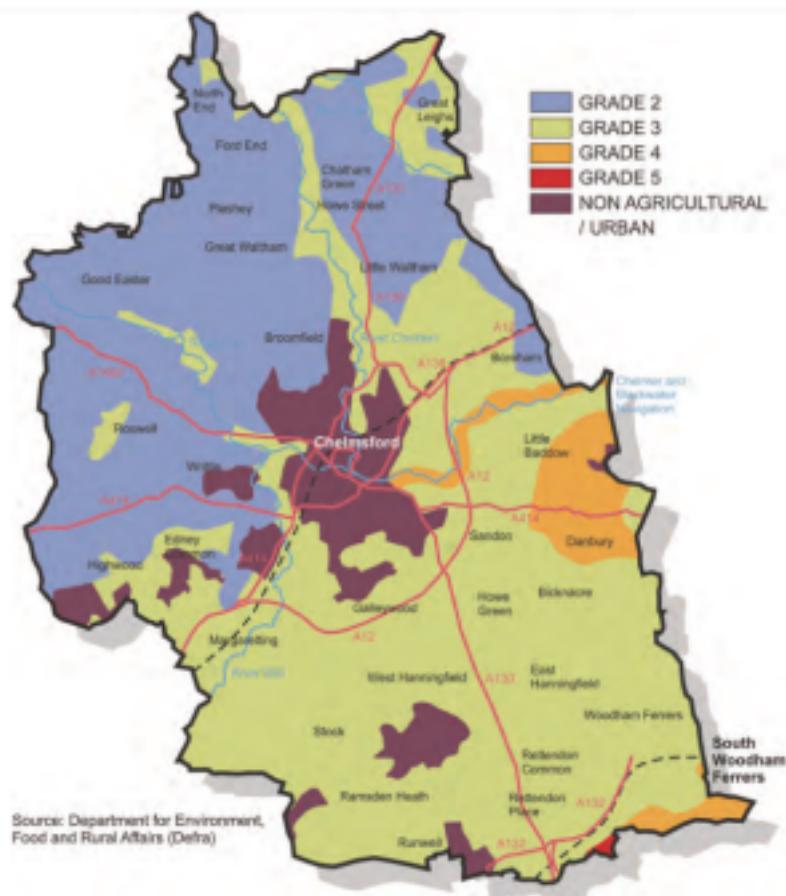
7.2 Applicants of solar farm developments should in the first instance seek to consider sites on previously developed land, brownfield or contaminated land, industrial land or land of Grades 3b, 4 or 5. As such, solar farm development proposals should avoid the best quality agricultural land (Grades 1, 2 and 3a under the Agricultural Land Classification) as per the NPPF, Annex 2, the NPPG and Policy S4 of the Chelmsford Local Plan. CCC considers that land of such quality is an important area for food production and reducing the agricultural land available could increase the reliance on the importation of food, with potential for subsequent environmental impacts such as increased carbon emissions.

7.3 A detailed Agricultural Land Classification survey must be undertaken on site to guide the site selection and site design process and be submitted as part of any planning application. Where development is proposed on higher grade agricultural land, justification must be provided of why the development cannot be sited on land of a lesser agricultural classification within the area. An assessment should also be provided on the impact of the development on the local supply of higher-grade agricultural land, the viability of the agricultural holding and any proposals for continued agricultural use where applicable around the arrays.

7.4 It should be noted that the majority of agricultural land with CCC's Administrative Area falls within Grades 2 or 3. Figure 4 provides an indicative map of the Agricultural land classification within the Chelmsford area. More detailed maps can be viewed on the Natural England website at [Natural England Access to Evidence - Regional Agricultural Land Classification Maps](#). If the site is Grade 3, the Agricultural Land Classification survey will need to be specifically assess whether the land meets the criteria for Grade 3a or 3b. Such surveys will need to be carried out by suitably qualified independent practitioners in accordance with up-to-date industry best practice.



Figure 4 Agricultural Land Classification



Landscape and Visual Impact

7.5 The NPPG states that deployment of large-scale solar farms can have a negative impact on the rural environment, particularly in undulating landscapes. It also states that the visual impact of a well-planned and well-screened solar farm can be properly addressed within the landscape if planned sensitively. This should be informed by an appropriate assessment in the form of either a Landscape and Visual Impact Assessment (LVIA) or a Landscape and Visual Assessment (LVA). The exact form of the assessment, the methodology and contents will need to be agreed in writing with the Local Planning Authority prior to commissioning. Any assessment should typically identify the specific effects of the proposed development on views and on the landscape, the capacity of the site and landscape to accommodate the solar farm development, level of impact of change and mitigation needs. The assessment should assess the wider landscape context and identify key receptors likely to be affected within a wider study area. It should consider the potential impact on landscape characteristics, special qualities of landscape designations and potential impact on key views. The assessment will also need to consider the impact of the overall scale, density, massing, height, layout, and materials used in relation to neighbouring buildings and the local area.



7.6 The City's Green Wedge is a local landscape designation that recognises the crucial role of the main river valleys in providing important open green networks for wildlife, flood storage capacity, leisure and recreation and sustainable means of transport (Policy S11). Any solar farm proposals will need to demonstrate that they do not materially harm the role, function and intrinsic character and beauty of the Green Wedge.

7.7 The Braintree, Brentwood, Chelmsford, Maldon and Uttlesford Landscape Character Assessment (2006) provides a high-level comprehensive Borough/District-wide assessment of landscape character within the Study Area and provides a useful reference in assessing the potential landscape and visual impacts of individual proposals: [Landscape Character Assessment \(2006\)](#). The Landscape Character types identified in the Landscape Character Assessment Landscape in Chelmsford are River Valley, Farmland Plateau, Drained Estuarine Marsh and Wooded Farmland, each of these have their own characteristics which are outlined in the Landscape Character Assessment profiles. These profiles set out key features and characteristic of the location and sensitivity to change. Of the areas identified, the Farnham Drained Estuarine Marsh character area and the Wooded Farmland character areas are shown to have high sensitivity to change. The River Valleys (Lower and Upper Chelmer River Valley and the Can and Wid River Valley) have a moderately to highly sensitivity to change or new development. The five farmland plateau character areas have a low to moderate sensitivity to change.

7.8 In addition to its Landscape Character Assessments, the Council will use its Historic Landscape Characterisation Study, Sensitivity and Capacity Assessments, alongside any other appropriate and relevant evidence which could include that being prepared to support a Neighbourhood Plan, to assess the character of the area and its sensitivity to change.

7.9 Any associated buildings and development on site including, but not limited to, substations, transformers, battery storage facilities, power cables, fencing, access tracks and construction compound must also minimise their landscape and visual impact and be designed to be appropriate to the context and character of the local area.

7.10 As part of the assessment, a detailed visual and landscape mitigation plan will be required to identify measures to avoid, reduce or remedy visual and landscape impact of the solar farm and its associated development. These may include landscape enhancements such as buffer areas and the use of natural features to screen the development such as hedges and trees including mass tree planting in line with the Council's 'Tree and Woodland Planting 10-year Programme'.

7.11 If the development proposes that the solar PVs follow the daily movement of the sun this must be made clear and all assessments undertaken having regard to this type of installation.



Biodiversity and Nature Conservation

7.12 Proposals for solar farms will need to be well-located and well-designed where the biodiversity and nature conservation impacts are or can be made acceptable. Solar farm proposals should seek to conserve and enhance designated sites and species, including their habitat or not result in the loss or deterioration of irreplaceable habitats in accordance with Policy S4 and DM16 of the Local Plan. Proposals will be expected to consider the multifunctional network of green infrastructure, and seek to protect, enhance and wherever possible restore ecosystems, securing a net gain in biodiversity. Ecologically important sites, including Sites of Special Scientific Interest (SSSI), Local Nature Reserves and County Wildlife Sites should be avoided. Where a development is considered likely to have a significant effect on the conservation objectives of a designated ‘European Site’ an Appropriate Assessment will be required under the Habitats Directive.

7.13 A detailed ecological survey must be undertaken to guide the site selection and site design process. This should also identify any ecological site mitigation measures and opportunities for ecological enhancement. When considering proposals, including their layout and design impact on any protected species and their habitats e.g. bats, badgers, and reptiles should be avoided, or where it cannot be avoided (through locating on an alternative site with less harmful impacts), it must be adequately mitigated or, as a last resort, compensated for. A pre-biodiversity and post-biodiversity assessment of the development proposals must also be undertaken and to deliver biodiversity net gain in accordance with Policy S4 and DM16. It is strongly recommended that development seeks to achieve a minimum of 10% biodiversity net gain in accordance with the emerging Environmental Bill. This must assess the potential negative effects on any loss of land and show how the mitigation hierarchy has been followed to measurably and quantifiably demonstrate that development proposals leave biodiversity in a better state than before.

7.14 A site management plan should be prepared and which must demonstrate how the land around the panels will be managed including providing a net gain in biodiversity. This could include enabling some low intensity animal grazing, the continued agricultural use of the site or the creation of new habitats to improve on-site ecology. An ecological monitoring programme will be required to monitor any impacts upon on-site flora and upon any particular features likely to support species (e.g. bats, birds, reptiles, amphibians) and to inform any changes that may be needed to the other particular habitats and species (e.g. bats) recorded on or adjacent to the site and to inform any necessary changes to the site management arrangements. The site management plan should include maintenance and stewardship arrangements for the site including landscape and ecology matters. This will ensure appropriate management and maintenance arrangements and funding mechanisms have been identified at an early stage and will be implemented. The BRE National Solar Centre Biodiversity Guidance for Solar Developments provides further guidance on how to support biodiversity on solar farms: [NSC - Biodiversity Guidance \(bre.co.uk\)](http://bre.co.uk)



7.15 The energy sector has the potential to make a significant contribution to the protection, improvement and creation of existing and new green infrastructure. The Essex Green Infrastructure Strategy (2020) is available at <https://www.placeservices.co.uk/resources/built-environment/essex-gi-strategy/> and provides additional guidance for applicants on how this can be achieved.

7.16 Trees and woodland also provide vital benefits to the environment, including filtering air pollution, reducing noise, and creating and connecting wildlife habitats. Proposals are encouraged to provide additional tree and woodland planting in line with the City Council's Climate and Ecological Emergency declaration and Action Plan, and 'Tree and Woodland Planting 10 year Programme' in order to increase the woodland cover significantly in the Chelmsford District. Further information is available online at [Climate emergency declaration and action plan - Chelmsford City Council](#)

Flood Risk and Drainage

7.17 Applications are required to provide a Flood Risk Assessment (FRA) to demonstrate how the proposal will avoid or manage flood risk on-site and will not exacerbate or create any degree of flood risk elsewhere. The proposal will be required to demonstrate that the site is safe from all types of flooding for its lifetime in accordance with the NPPF, paragraph 164 and Local Plan Policies S1, S2, S11 and DM18. Applications are required to consider the guidance on surface water drainage in the Essex Sustainable Drainage Systems (SuDS) Design Guide (2020), in terms of design quality, and the benefits to the local community and the environment. Applications should also refer to the standards and guidance for SuDS schemes as recommended by CIRIA at www.ciria.org/ notably the SuDS Manual C753 which covers the planning, design, implementation and maintenance of SuDS.

7.18 Where access tracks need to be provided, permeable tracks should be used, and localised SuDS, such as swales, should be used to control any run-off where recommended.

Pollution, Glint and Glare and Safety

7.19 In line with Local Plan Policy DM29, any proposals will be required to safeguard the living environment of the occupiers of any nearby residential property, not result in excessive noise, activity or vehicle movements and be compatible with neighbouring or existing uses in the vicinity of the development by avoiding unacceptable levels of polluting emissions by reason of noise, light, smell, fumes, vibrations or other issues which have a damaging effect on the environment and the local resident's and public's enjoyment, health or amenity, unless appropriate mitigation measures can be put in place and permanently maintained at the expense of the applicant.

7.20 A noise and vibration assessment will be required covering the construction, operation and decommissioning phases of the proposal in order to identify any potential impacts and necessary mitigation requirements.



7.21 A Glint and Glare Assessment is likely to be required as part of a planning application to consider the potential impact of glint and glare from the solar panels on landscape/visual amenity, aircraft, rail and road safety, local residents and users of public rights of way. When developing their proposals applicants should undertake early engagement with airport, rail and the local highway authority and Highways England to agree the scope of the assessment where the development has the potential to affect such infrastructure.

7.22 Where a battery energy storage is proposed on the development site, a management plan will be required to demonstrate how this facility will be constructed and operated safely.

Soil stripping, storage and replacement

7.23 Large scale solar farms are likely to require a degree of soil excavation to provide for site compounds, access roads and cable trenching etc. Details of the proposed approach for soil stripping, storage and replacement and site levelling will be required to be submitted alongside a planning application.

7.24 ECC would seek a Construction Resource Management Plan (equivalent to a Site Waste Management Plan) to be prepared outlining how waste materials will be disposed of to appropriate recycling facilities or appropriately licensed landfills. A high-level outline management plan with a commitment to sustainable construction and waste management principles should be submitted with the planning application. Additional, more detailed information will then be required to be submitted as part of a condition should permission be granted. This should quantify the volumes of waste re-used on site and leaving the site, as well as demonstrate how the amount of waste forecasted to leave the site has been proactively minimised at construction, operation and deconstruction stages by incorporating sustainable working practices, including a consideration of the material used and their procurement. Waste arising from the site should be assessed in light of the available capacity to manage it where such an assessment can be made.

Security fencing and lighting

7.25 Any proposal will be required to minimise the use and height of artificial fencing seeking to make use of any natural site features such as field hedges and trees, where possible. Planning applications should include details of all site security measures and features such as perimeter fencing, CCTV cameras and lighting with significant consideration given to mitigating their impact on wildlife and ecology. Planning applications will be required to outline arrangements and specifications of site lighting with an appropriate assessment of how any impact on landscape, ecology and nearby communities will be minimised. Where fencing is proposed, these should include suitable open sections at the bottom to allow small mammals identified in the area to pass through. Any fencing should ensure it does not pose an increased safety risk to all the PROW users, including equestrians and cyclists.



7.26 Proposals should seek to preserve open site lines across the countryside wherever possible and where stronger boundary treatments are not compatible combining deer type fencing with suitable monitored CCTV, Perimeter Intrusion Detection System (PIDS), 24 hour response, and enhanced building and compound security may provide a compromise solution. Where due to increased risk this is not possible a black or green weld-mesh fence can be less obtrusive. Attention is drawn to the following documents that suggest risk commensurate measures to mitigate the crime risk -www.bre.co.uk/filelibrary/pdf/other_pdfs/KN5524_Planning_Guidance_reduced.pdf

www.nfumutual.co.uk/farming/farm-safety/loss-prevention-guidance-farming/

Figure 5 Solar Lighting and Fencing (Source: Succo from Pixabay)





Traffic and Transport

7.27 Proposals will be required to demonstrate that the local and strategic highway network will be able to accommodate the type and number of vehicle movements during the construction and operation phases of the site. In addition, proposals will need to demonstrate that both the site access and vehicle movements to and from the site will have no detrimental adverse impacts on highway safety, including cyclists, pedestrians and equestrians. The site should also be located to enable trips to be made by walking, cycling and public transport, particularly during the construction period. As such, there may be a need for off-site mitigation to be required to improve the highway network in order to accommodate trips by cycling, walking and public transport, and to ensure the highway network is suitable for the expected level of construction traffic. Applications should be accompanied by a detailed Transport Assessment and Construction Environmental Management Plan (CEMP). A Travel Plan will also be required to promote the use of sustainable modes and need to monitor the effectiveness of the Travel Plan, its measures and incentives. Applicants are also encouraged to engage with Essex Highways as part of their pre-application discussions.

7.28 Any proposal requiring temporary construction compounds will be required to include details of their size, location, forecast traffic movements and their proposed restoration post construction phase. Any proposed temporary construction compound should be carefully located in order to minimise environmental or amenity impact. Site access tracks to the solar farm should be minimised to better enable the site to be restored at the end of the project.

Public Rights of Way (PROW)

7.29 PROW are important amenities for local communities, which can help to improve their mental and physical health and wellbeing. This importance should be recognised, protected and enhanced through any proposal by providing necessary mitigation and enhancement measures, such as consequential improvements to the PROW network through improving connectivity or the installation of interpretation boards or visitor facilities that give benefit to users of PROW.

7.30 Applicants will need to demonstrate to the highway authority that all PROW impacted upon by a proposal will remain accessible to the general public and convenient for their use. Any PROW through the site should remain usable, retain their recreational amenity and character, and be integrated as part of the proposal. In the event that any proposal affects a PROW details of all works necessary to ensure its continued availability during and post construction will be required. If PROWs have to be temporarily or permanently diverted then no development should commence on site until an Order securing the diversion of the existing definitive right of way to a route has been agreed and has been confirmed with ECC and CCC, and the new route has been constructed. Applicants are encouraged to engage with ECC as part of their pre-application discussions if there is to be any impact on a PROW, as well as exploring opportunities to enhance PROW or provide 'missing links' in the PROW network. Engagement with other user groups is also encouraged. The British Horse Society has specific guidance (www.bhs.org.uk/accessadvice) to assist solar farm development to ensure development does not cause obstructions to horse riders.



Historic Environment

7.31 In line with Chelmsford Local Plan Policies S3, S9, DM13 and DM14 any development should conserve and where appropriate enhance the historic environment recognising the positive contribution it makes to the character and distinctiveness of Chelmsford through the diversity and quality of heritage assets and their settings. Depending on their scale, design and prominence, a large-scale solar farm within the setting of a heritage asset may cause substantial harm to the significance of the asset, which will need to be justified in accordance with the requirements of Policy DM13 and DM14.

7.32 A detailed heritage survey should be undertaken to guide the site selection and site design process. This should identify listed buildings, Scheduled Ancient Monuments (SAM), Registered Parks and Gardens, historic landscapes, Conservation Areas or any other heritage assets located within, immediately adjacent or in the wider setting of the site. The assessment should include a search area of a minimum of 1km radius from the site boundary, in certain cases a larger area, for instance where there may be an impact on long distance views. The assessment should identify the extent and contribution of setting, define the impacts of development and where appropriate suggest mitigation or enhancement measures.

7.33 In line with Local Plan Policy DM15 a desk based archaeological assessment should be undertaken to identify any possible archaeological remains of historical importance, by referencing the Historic Environment Record, and propose further investigation, recording and mitigation as necessary. This may include the necessary preservation of archaeological interest in situ or through record.

7.34 An assessment to evaluate the impact on a historic landscape may also be required, to define historic boundaries, ponds, hedgerows, historic and ancient woodland, and other landscape features which contribute to the significance of a historic landscape. An assessment to evaluate the impact on Historic Land Characterisation should also be provided.

7.35 Further guidance on undertaking historic environment assessments is contained within the Council's Making Places SPD. Further advice on historic environment issues relating to different types of commercial renewable energy development proposals, including solar photovoltaics (PV) is also available from Historic England

at: <https://historicengland.org.uk/images-books/publications/commercial-renewable-energy-development-historic-environment-advice-note-15/heag302-commercial-renewable-energy-development-historic-environment/>

Socio-Economic Impacts and Community Gain

7.36 An assessment will be required to be submitted alongside development proposals to assess any social and economic effects of the proposal such as on tourism, human health, land-use, telecommunications, waste and utilities, recreation and employment, opportunities and benefits to the local economy, and any required mitigation.



7.37 It is important that local communities can realise the benefits associated with the project throughout its lifetime. As such, opportunities for community benefit and a positive community legacy from the development should be explored although these will not be relevant to the determination of a planning application. Opportunities could include providing jobs to local people both during construction and operation, promoting cycling, equestrian, and walking routes through the site, providing free or discounted energy to local public buildings, establishing a local Environmental Trust, installing information boards panels around the site and providing visitor/education facilities to raise awareness about renewable and low carbon energy. Further guidance is contained in [BRE NSC \(2015\) Community Engagement Good Practice Guidance for Solar Farms](#)

7.38 From 2021, as a result of the recommendations made from the Essex Climate Action Commission (pending adoption by ECC), it is expected that all large-scale renewable energy developments in Essex should include the offer of an element of community ownership.

Health Impact Assessment (HIA)

7.39 The Council may require schemes, particularly Nationally Significant Infrastructure Projects (NSIPs), to undertake a HIA of their proposal. The applicant should engage with CCC to establish if a HIA is required and the scope of any HIA at pre-application stage. It is recommended that any HIA is consistent with the requirements outlined in the Essex Design Guide (2018) and the Essex Planning Officers Association (EPOA) document 'Essex Healthy Places - Advice notes for planners, developers and designers'. This document provides guidance on what needs to be considered when looking at health, wellbeing and the environmental sustainability. The type of HIA required will be advised by the Council with advice from health partners as required, including ECC. It is expected that schemes will consider Sport England's Active Design Principles and in particular the creation of a network of multifunctional open space supporting SuDS, wildlife habitat and productive landscapes. Further information is available at [Health Impact Assessment Supplementary Guidance \(www.essexdesignguide.co.uk\)](#)

Cumulative Impacts

7.40 CCC expects applicants to assess the cumulative impacts and opportunities as part of their proposal in accordance with the NPPF. This includes the consideration of cumulative impacts relating to highways, landscape and visual impacts, flood risk, pollution on health, living conditions and the natural environment, as well as the potential sensitivity of the site or the wider area to impacts that could arise from the development. Cumulative impacts with any other existing or approved developments should also be considered. The applicant should engage with CCC to scope the potential cumulative impacts at pre-application stage. Cumulative impacts will also be considered as part of any EIA screening to the application.



Technological Requirements

7.41 Applicants should provide information on any technical considerations to support the siting and size of the proposed solar farm and demonstrate that a suitable grid connection will be possible. Underground cabling systems will be encouraged over the use of overhead powerlines to connect to the national grid. Details on the electricity generating potential and profile of the solar farm should also be provided. This should include information to demonstrate that the proposed panel layout maximises coverage on the plot, and optimises performance of the panels from both an orientation and angle of panel perspective.

Carbon Emissions

7.42 Information should be provided alongside development proposals regarding the solar PV technology to be used and the net reduction in CO² (Greenhouse Gas Emissions) emissions per annum and over the course of the proposed development.

7.43 Information on the potential benefits of the development such as the average numbers of homes and electric cars that could be powered per year and visualisations of the solar farm in place would also provide useful background information.

7.44 Proposals should also seek to ensure associated emission sources and the overall carbon footprint of the development is minimised. Details of how this will be achieved would be useful background information. An understanding of any battery storage facility and the expected lifespan and disposal of any batteries is expected to be included in such information.

Community Engagement

7.45 Solar farm developers will be required to demonstrate that they have undertaken a high standard of public pre-application activity in line with the Council's Statement of Community Involvement, 2020 (SCI) and the developer's Statement of Community Consultation (SOCC) in the case of Development Consent Order submissions. Effective pre-application engagement allows local communities and others to gain a better understanding of the project and its potential impacts. It also allows local communities to make suggestions which the developer can consider when developing and finalising their planning proposals. Local knowledge of the area can help developers to omit unsuitable options and minimise impacts on the local community where possible. Community engagement will also be strongly encouraged during the construction period and operational life of the solar farm to develop strong local relationships between the operator and the local community.

7.46 Developers of NSIPs are legally required to carry out pre application consultation on proposed developments and to submit a Consultation Report as part of their DCO application setting out how they have complied with the statutory pre-application consultation requirements, and that they have had regard to the responses. PINS will consider the Consultation Report, alongside any adequacy of consultation representation made by a local authority and the other application documents, before deciding whether or not to accept the application for examination.



7.47 The Council can provide general advice on who, when and how to engage with the local community. Further guidance is also contained in [BRE NSC \(2015\) Community Engagement Good Practice Guidance for Solar Farms](#)

After Use/Restoration

7.48 Applications need to include outline proposals for the timely restoration of the land to its previous use at the end of the solar farm operational life, retaining any landscape or biodiversity enhancements and community benefits. Restoration should be completed as soon as practicably possible. Applicants should also show provision for the restoration of the site at the end of operation, for example, by providing a financial bond which they would pay into during the life of the solar farm.

Duration of Planning Permission

7.49 Although solar farms may be in operation for many decades they are regarded as a temporary use of land and planning permissions will limit the duration for which the solar farm can remain in place. Proposals to extend the life of the development would require separate planning consent.

Minerals and Waste

7.50 The adopted Essex Minerals Local Plan (MLP) and the Essex and Southend-on-Sea Waste Local Plan (WLP), or successor documents, include policies to safeguard mineral reserves and mineral and waste facilities and infrastructure, including Water Recycling Centres, from non-mineral and waste development. Where proposals exceed the defined safeguarding thresholds or are located in minerals and waste consultation areas as outlined in the MLP and the WLP, a Minerals Resource Assessment or Minerals/ Waste Infrastructure Impact Assessment will be required to be submitted as part of a planning application.

7.51 Although temporary structures, solar farms may be sensitive to the impacts of proximal mineral and/or waste working and therefore they are considered to be 'included development' for the purposes of safeguarding policy as they are typically intended to remain in-situ for longer than five years. However, following a consideration of the current spatial and mineral contexts, some of the requirements of safeguarding policy can potentially be set aside for solar farm applications provided that:

- the application is clear that the proposed scheme is temporary in nature, and
- appropriate conditions are applied to the grant of any planning permission which ensure that the land is returned to its current use upon cessation of the permission granting the use of the land for a solar farm and/or ancillary uses.

7.52 It is required that promoters contact the Minerals and Waste Planning Authority to confirm the requirement for, and scope, for such assessments as part of pre-application advice or where any conditions are to be removed or modified.



Planning Obligations

7.53 CCC's Planning Obligations SPD sets out the City Council's approach towards seeking planning obligations which are needed to make development proposals acceptable in planning terms.

7.54 Some cases may require financial contributions, other cases may require the details of mitigation measures to be included in an agreement so that a robust legal mechanism is in place to ensure appropriate mitigation is carried out.

7.55 Other matters may be more appropriate to be covered by conditions. Each site will be considered on its own merits and engagement will be had with the relevant applicant/ stakeholders to identify such cases.

Supporting documents to be submitted with a planning application

7.56 The Government sets out which documents must be provided with every planning application. These are the National Validation Requirements. The Council needs additional information to fully assess your application. These are the Local Validation Requirements. Applicants must comply with both national and local requirements when submitting a solar farm planning application. More information is available at [Local Validation Requirements - Chelmsford City Council](#)

7.57 In addition to the usual site location plan, completed application form and planning application fee the following documents are likely to be required for a solar farm planning application:

- Planning statement
- Design and access statement
- Details of connection to electrical grid
- Agricultural Land Classification reports/evidence including Arboricultural Impact Assessment
- Minerals Resource Assessment
- Landscape and Visual Impact Assessment (LVIA)
- Detailed landscape mitigation plan
- Ecological Impact Assessment
- Biodiversity Net Gain Assessment
- Landscape and Ecology Management Plan
- On-going site management strategy
- Flood Risk Assessment
- Assessments of Noise, Vibration, Glint and Glare
- Battery Energy Storage Management Plan
- Transport Assessment
- Construction Environment Management Plan (CEMP) including details of any compound and how construction traffic will be managed
- Site Waste Management Plan including methodology for soil stripping, storage and replacement



- Options Report demonstrating Connection to the National Grid including environmental constraints; type of connection – substation or circuit; capacity of network; cost of connection etc
- Health Impact Assessment
- Heritage survey and any necessary heritage assessments
- Archaeological desk-based study
- Statement of Socio-Economic Impacts and Community Gain
- Statement of cumulative impacts
- Statement of community involvement
- Statement of after use/restoration
- Planning Performance Agreement
- Enhancement and Mitigation Strategy.

7.58 The following are also considered to be useful background information:

- Electricity generating potential statement
- Statement of efficiency of proposed solar power development.

7.59 Depending on the specific application details further documents not listed above may be required.

7.60 Applicants of NSIP solar farm developments are advised to consult with The Planning Inspectorate on validation requirements for DCO submissions.



8- Locational Principles

8.1 When assessing a planning proposal for a solar farm the Council will consider the proposal alongside a range of policies, guidance and material planning considerations as described in this SPD. The following section provides information on locational principles for solar farm development within Chelmsford which are likely to have the least negative impact. It also outlines areas which are likely to be unsuitable or highly sensitive meaning that they would require a greater level of mitigation in order to make them acceptable for solar farm development. It does not identify any preferred sites for solar farm development.

8.2 Solar farm development proposals should demonstrate that they:

- do not adversely harm the role and purpose of the Green Belt and demonstrate very special circumstances in order to be approved (Policy S11)
- do not materially harm the role, function and intrinsic character and beauty of the Green Wedge (Policy S11)
- do not adversely impact on the identified character and beauty of the Rural Area (the countryside outside of the Urban Areas, Defined Settlements and Green Belt)
- avoid the best quality agricultural land defined as Grade 1, 2 and 3a under the Agricultural Land Classification (Strategic Policy S4)
- avoid areas of identified medium-high landscape quality and/or sensitivity unless the negative impacts can be adequately mitigated
- do not result in harm to protected species or their habitats or in the loss or deterioration of irreplaceable habitats (Policy DM16)
- avoid ecologically important sites, including Sites of Special Scientific Interest (SSSI), Local Nature Reserves and County Wildlife Sites (Policy DM16)
- avoid or minimise harm to the historic environment or total loss of significance to a designated or non-designated heritage asset or its setting (Strategic Policy S3)
- avoid harmful cumulative impacts in combination with any other existing or approved development including nearby solar farms, and
- can facilitate safe and convenient access to the highway network, and ensure the proposals provide no adverse impact on the capacity and safety of that highway network during all stages of development.



9- Solar Energy UK

9.1 Solar Energy UK works for and represents the solar energy sector. It has produced a list of 10 commitments of best practice guidance that solar farm developers should comply with. These are supported by CCC and include many of the considerations set out within this SPD. The 10 commitments are outlined below:

1. We will focus on non-agricultural land or land which is of lower agricultural quality.
2. We will be sensitive to nationally and locally protected landscapes and nature conservation areas, and we welcome opportunities to enhance the ecological value of the land.
3. We will minimise visual impact where possible and maintain appropriate screening throughout the lifetime of the project managed through a Land Management and/or Ecology plan.
4. We will engage with the community in advance of submitting a planning application.
5. We will encourage land diversification by proposing continued agricultural use or incorporating biodiversity measures within our projects.
6. We will do as much buying and employing locally as possible.
7. We will act considerately during construction, and demonstrate 'solar stewardship' of the land for the lifetime of the project.
8. We will seek the support of the local community and listen to their views and suggestions.
9. We commit to using the solar farm as an educational opportunity, where appropriate.
10. At the end of the project life we will return the land to its former use.

Figure 6 Photovoltaic Panels (Source: LCEC from Pixabay)





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