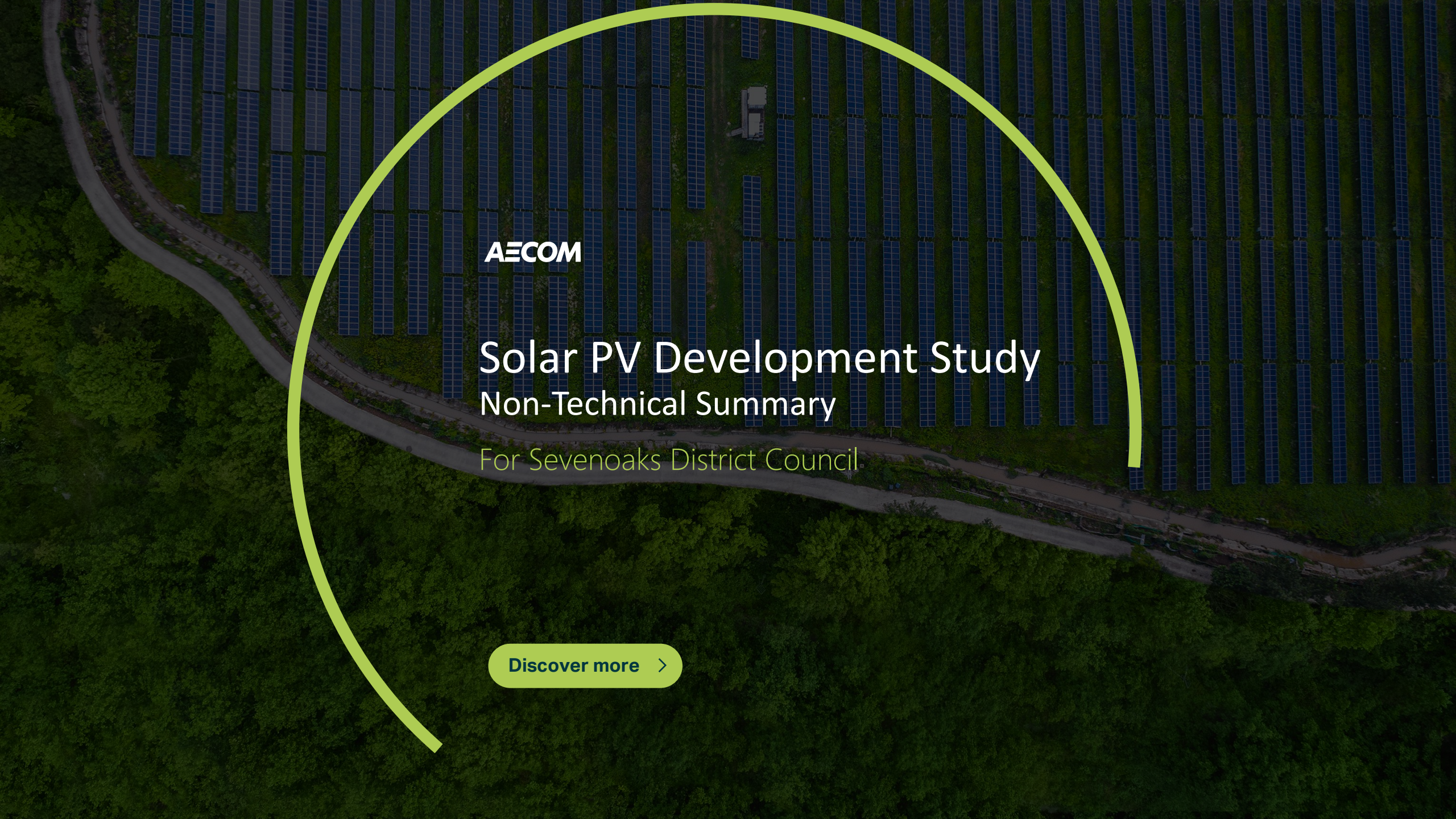




AECOM

Solar PV Development Study

Non-Technical Summary

For Sevenoaks District Council

[Discover more >](#)

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Context

Understanding the planning framework that governs solar PV development in Sevenoaks District



Introduction

AECOM was commissioned by Sevenoaks District Council to identify potentially suitable locations for ground-mounted solar PV development across the District, to inform an updated solar PV planning policy.

- Timed to support the Local Plan update ahead of Regulation 19 consultation (Summer 2026) and planned submission in December 2026
- Sites assessed for solar PV farms up to 100 MWp capacity
- Sevenoaks is highly constrained: significant Green Belt coverage, two National Landscapes, and ecological and heritage designations
- A desktop GIS-based assessment of environmental, planning, and grid constraints was undertaken across the full District
- Rooftop solar and site-level surveys are out of scope: this is a strategic, desk-based study only



Summer 2026

Regulation 19 Consultation



December 2026

Local Plan Submission



Up to 100 MWp

Potential solar PV sites assessed

Policy Landscape

Three layers of planning policy shape where and how ground-mounted solar PV can be developed in the Sevenoaks District.

1

National Planning Policy

Councils must plan positively for renewable energy and identify suitable locations. However, over 90% of Sevenoaks District is Green Belt. Solar PV development within the Green Belt is generally inappropriate development and will only be permitted where very special circumstances can be demonstrated, unless the proposal falls within one of the NPPF exceptions, including the grey belt provisions of paragraph 155.

2

National Policy Statements (2026)

Three new national statements covering energy, renewables, and electricity networks came into force in January 2026. These are a material consideration when SDC determines planning applications for solar farms below 100 MWp.

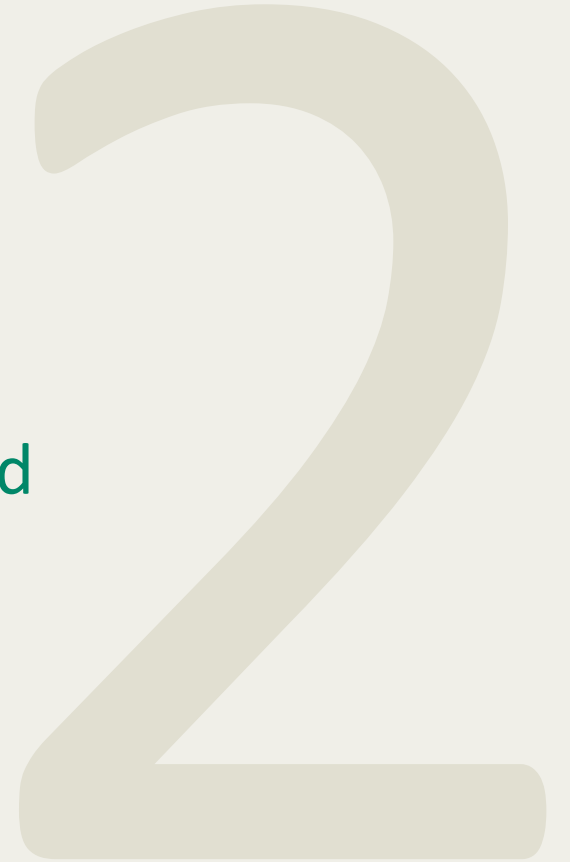
3

National and Local Planning Guidance

National guidance directs councils to prefer lower-quality agricultural land for solar development and requires assessment of landscape, heritage, and ecological impacts before planning permission is granted.

Constraints Mapping

A desk-based review of landscape, heritage, ecological and geographic constraints across Sevenoaks District



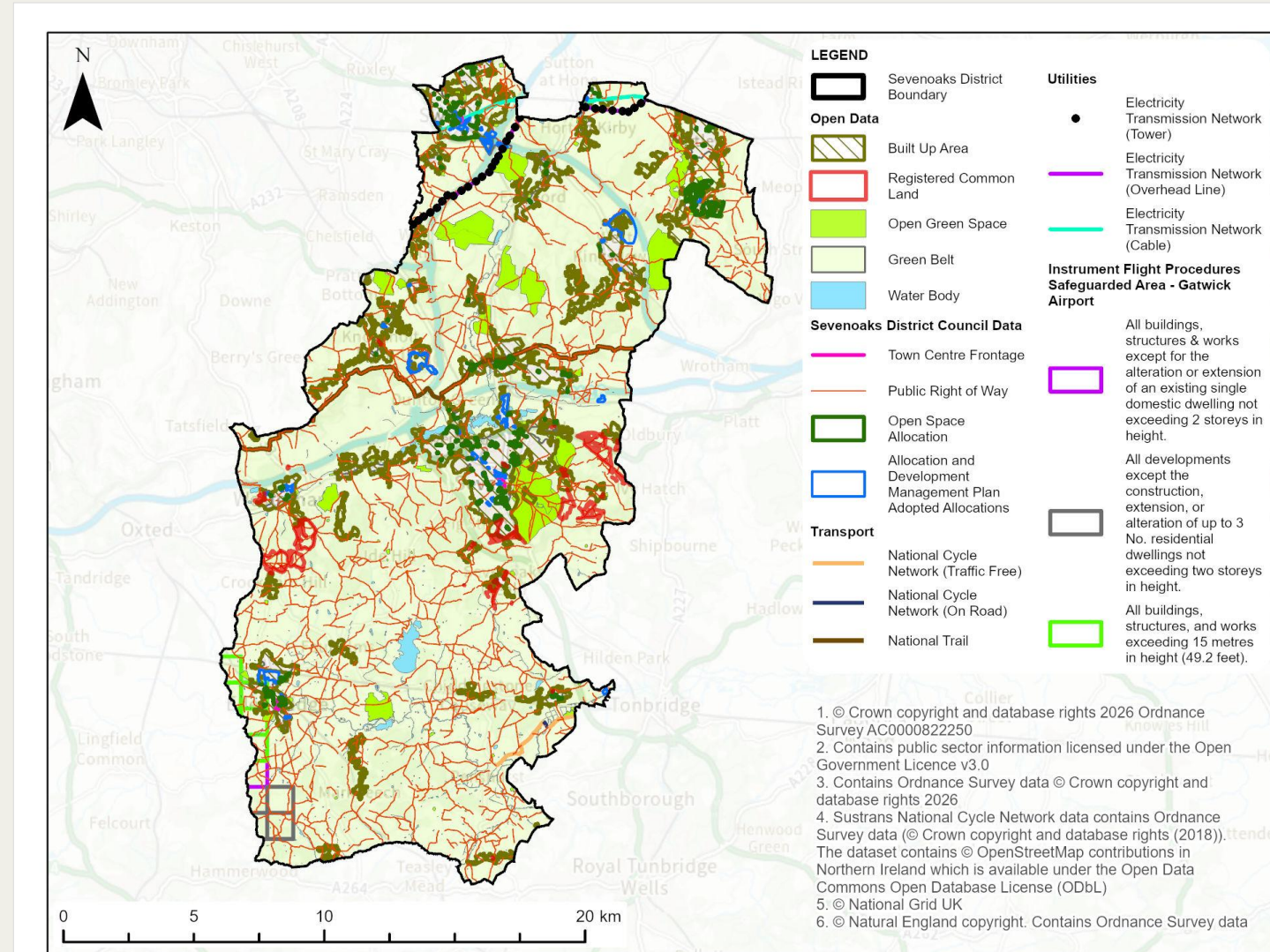
Key Constraints

The map shows the key constraints that determine where solar PV development can potentially occur across the District.

● **Hard constraints:** cannot be moved or built over (e.g., Roads, transmission lines, cycle networks)

● **Soft constraints:** can be mitigated or rerouted (e.g., Public Rights of Way, some buffer zones)

A full list of the hard and soft constraints can be found in the Solar PV Development Study Report.



Land Allocations

Allocated land across the District is excluded from solar PV consideration. These are hard constraints.



Proposed Allocations: Sites identified for housing and economic growth, including within Green Belt



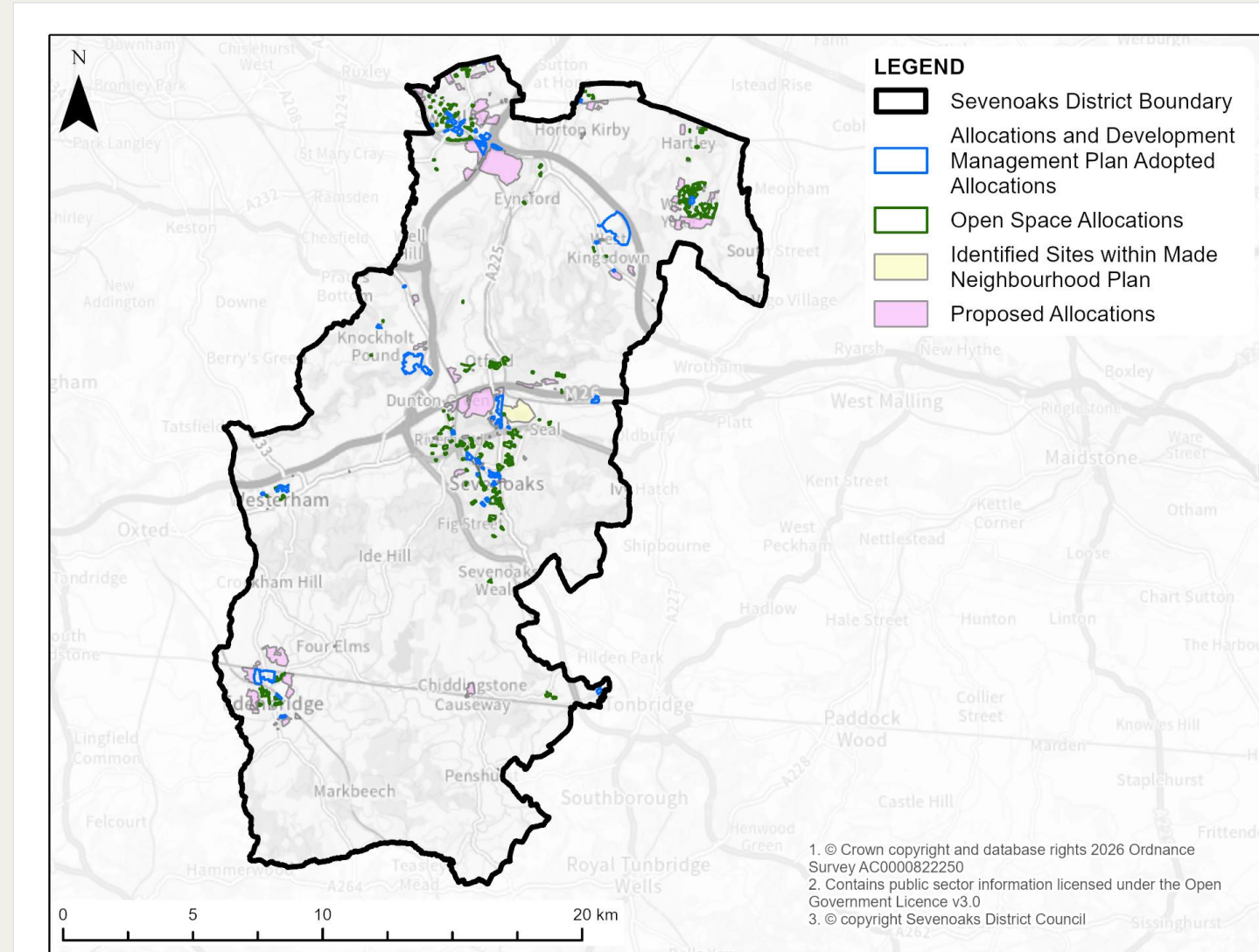
Neighbourhood Plan Sites: Potential development sites identified by the Sevenoaks Town Neighbourhood Plan (2023)



Open Space: Protected land for public use including parks, sports facilities and green space

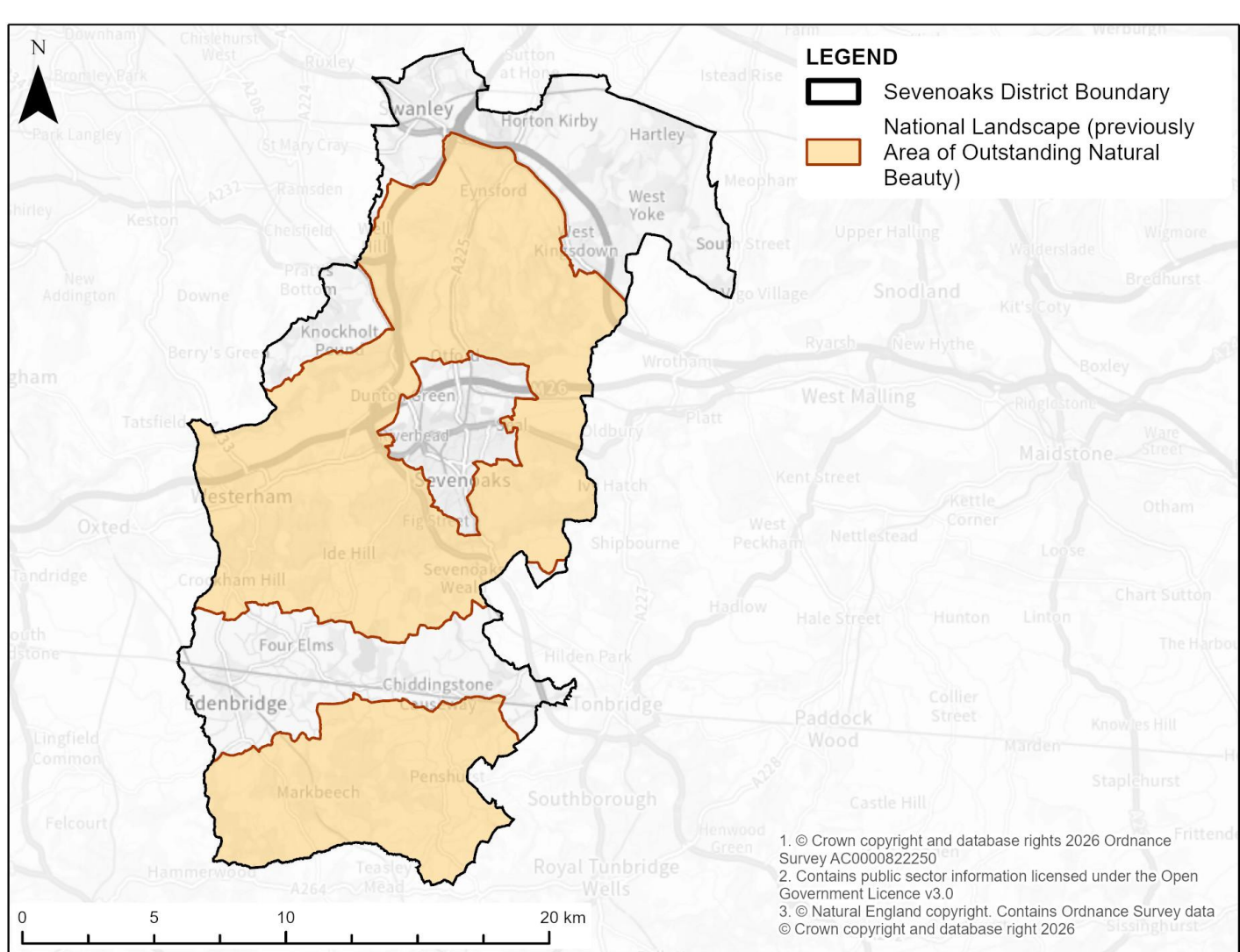


ADMP Allocations: Sites allocated for open space, residential, employment and mixed uses (adopted 2015)



National Landscape Designations

Over half of Sevenoaks District falls within two National Landscape designations, both of which strongly resist commercial-scale solar development.



Kent Downs National Landscape *"Will usually strongly resist proposals for commercial-scale solar farms"*

High Weald National Landscape *"Not considered suitable locations for commercial scale greenfield ground-mounted solar farms"*

Both the [Kent Down National Landscape Management Plan \(2021\)](#) and the [High Weald National Landscape Management Plan \(2024\)](#) provide guidance on what is more likely to be accepted with regards to solar PV development within each designated area.

Heritage Constraints

Sevenoaks District has a high concentration of heritage assets that must be considered in the siting of any solar development.



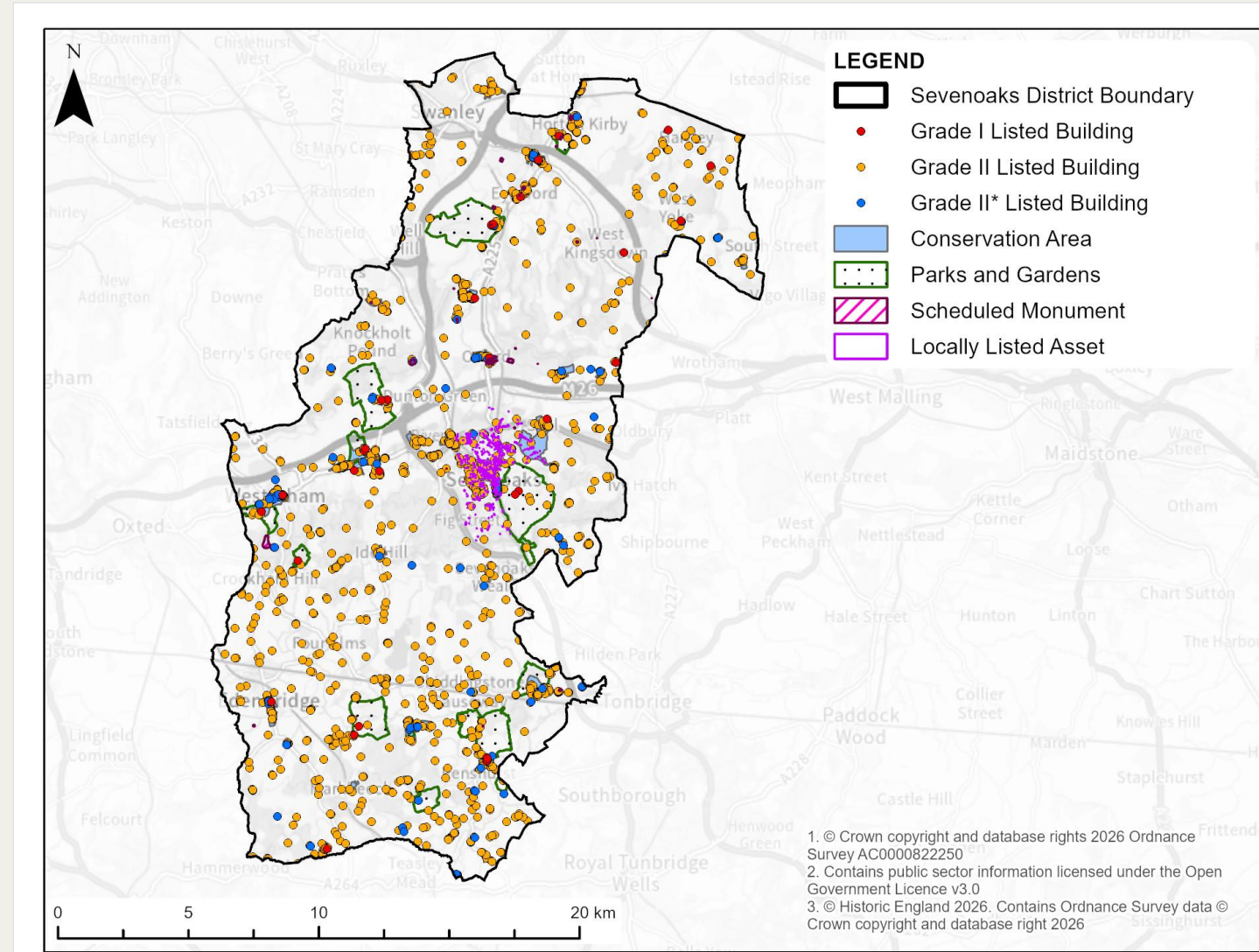
Listed Buildings: Hundreds of Grade I, II and II* listed buildings across the District: a protective buffer and setting assessment is required for any nearby solar development



32 Scheduled Monuments: Should not be harmed, altered or destroyed by solar development



17 Registered Parks & Gardens + multiple Conservation Areas: Any development affecting their setting must be formally assessed before planning can be granted



Statutory Designations

Sevenoaks District contains numerous legally protected ecological sites, with additional international designations outside the District boundary also requiring consideration.



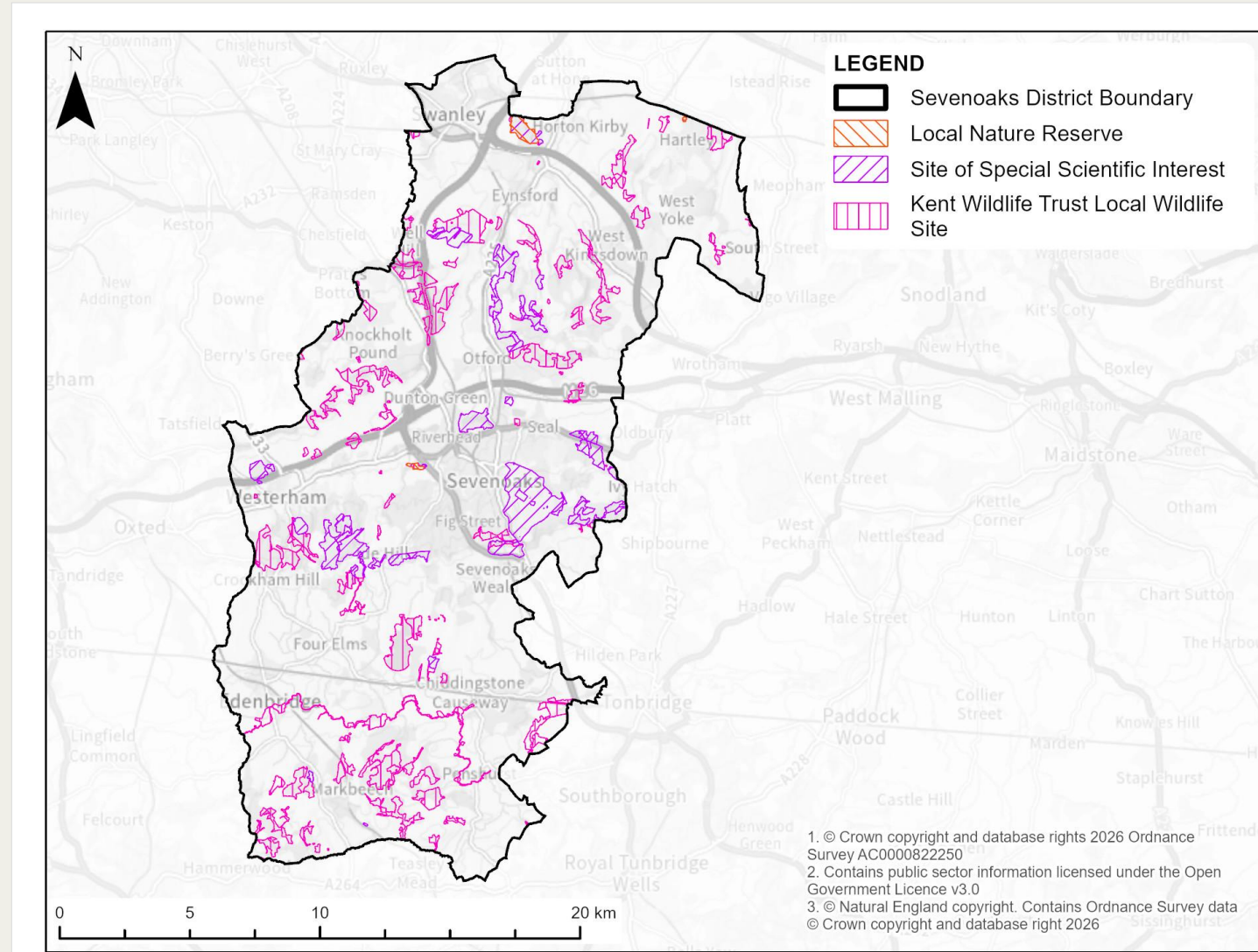
17 Sites of Special Scientific Interest (SSSIs) + 4 Local Nature Reserves: Legally protected - direct habitat loss within these sites will not be supported. Indirect effects such as noise or drainage changes may be acceptable with appropriate mitigation.



3 International Special Protection Areas (SPAs): Ashdown Forest, Thames Estuary and Medway Estuary - designated for bird interest. Functional land within the District that supports qualifying species must be assessed.



Local Wildlife Sites: Not legally protected but should be retained where practicable. Not a hard constraint but flagged in any planning assessment.



Habitats & Species

The presence of specific habitats and protected species cannot be confirmed by desk study alone — field surveys are required prior to any planning application.



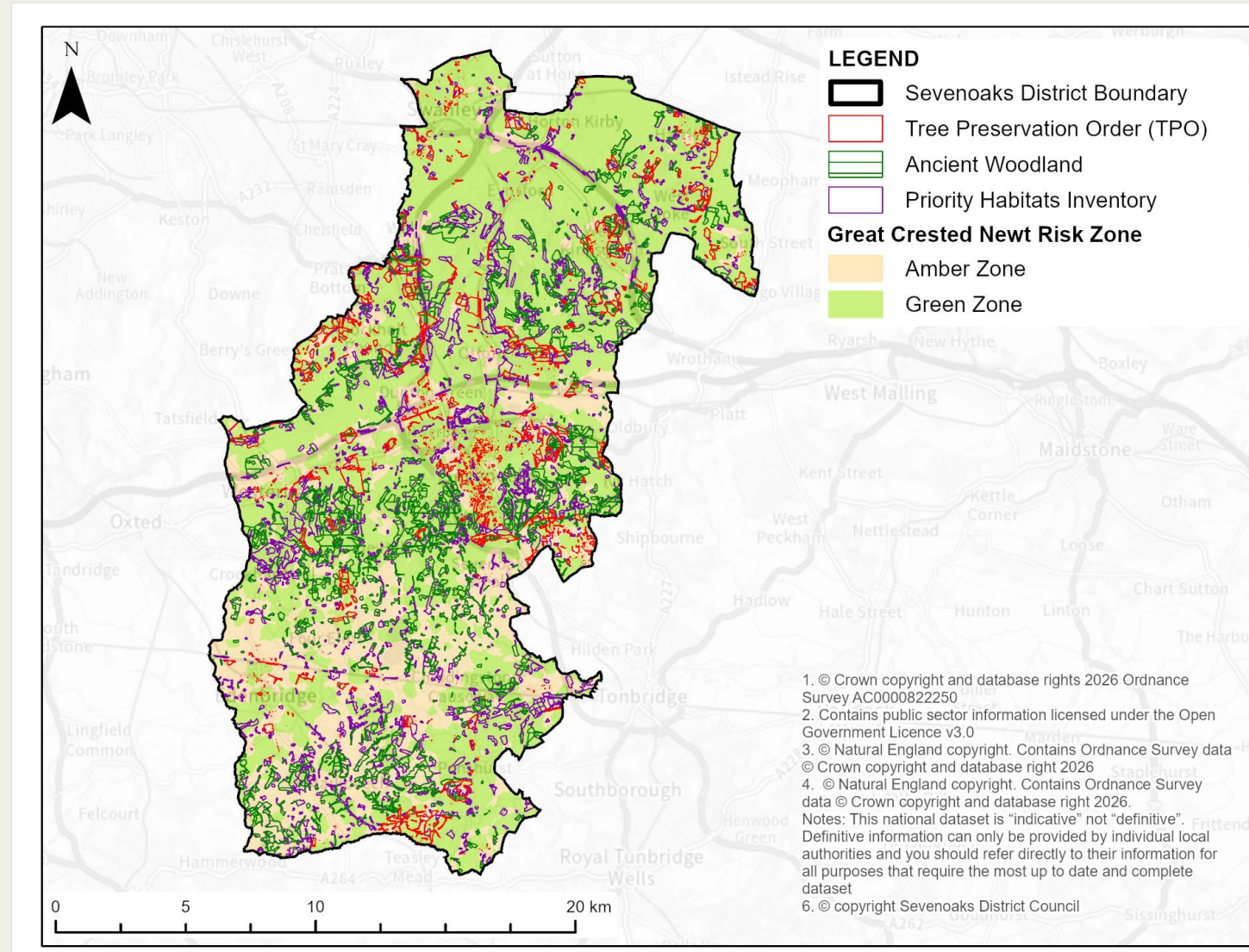
Priority Habitats: Wood pasture, traditional orchard, deciduous woodland and chalk rivers are present across the District. These should be retained and buffered - their presence does not prevent development, but mitigation or compensation is required.



Protected Species: Are likely to occur on large-scale solar PV sites. Impacts can typically be mitigated through appropriate survey and design, and habitats can be retained with suitable buffers.



Biodiversity Net Gain (BNG): Well-sited solar schemes can deliver genuine biodiversity benefits - habitat enhancement and connectivity should be built into any scheme from the outset and will be viewed favourably.

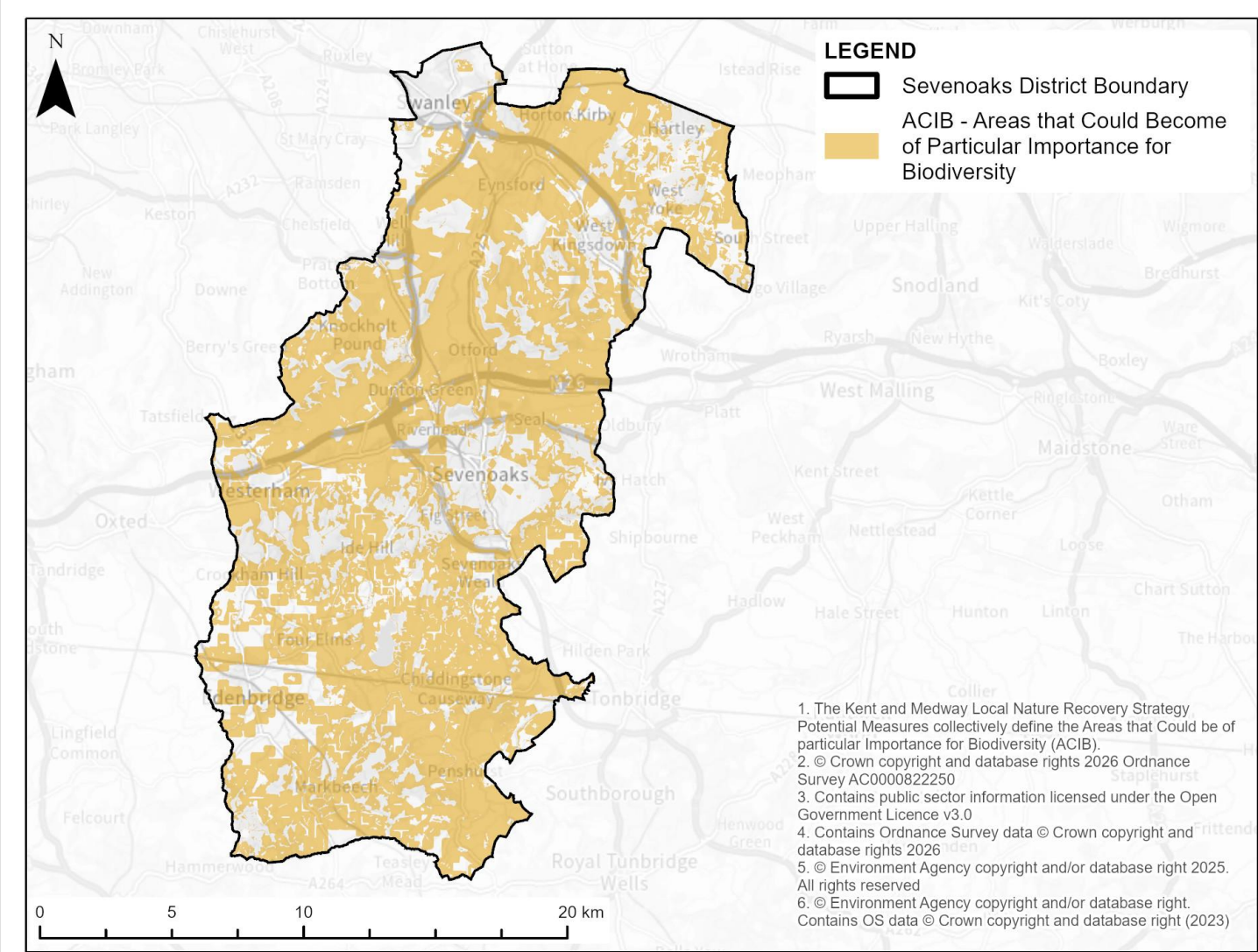


Nature Recovery Strategy

The Kent and Medway Local Nature Recovery Strategy, published November 2025, identifies where nature recovery actions across the District would deliver the greatest benefit.

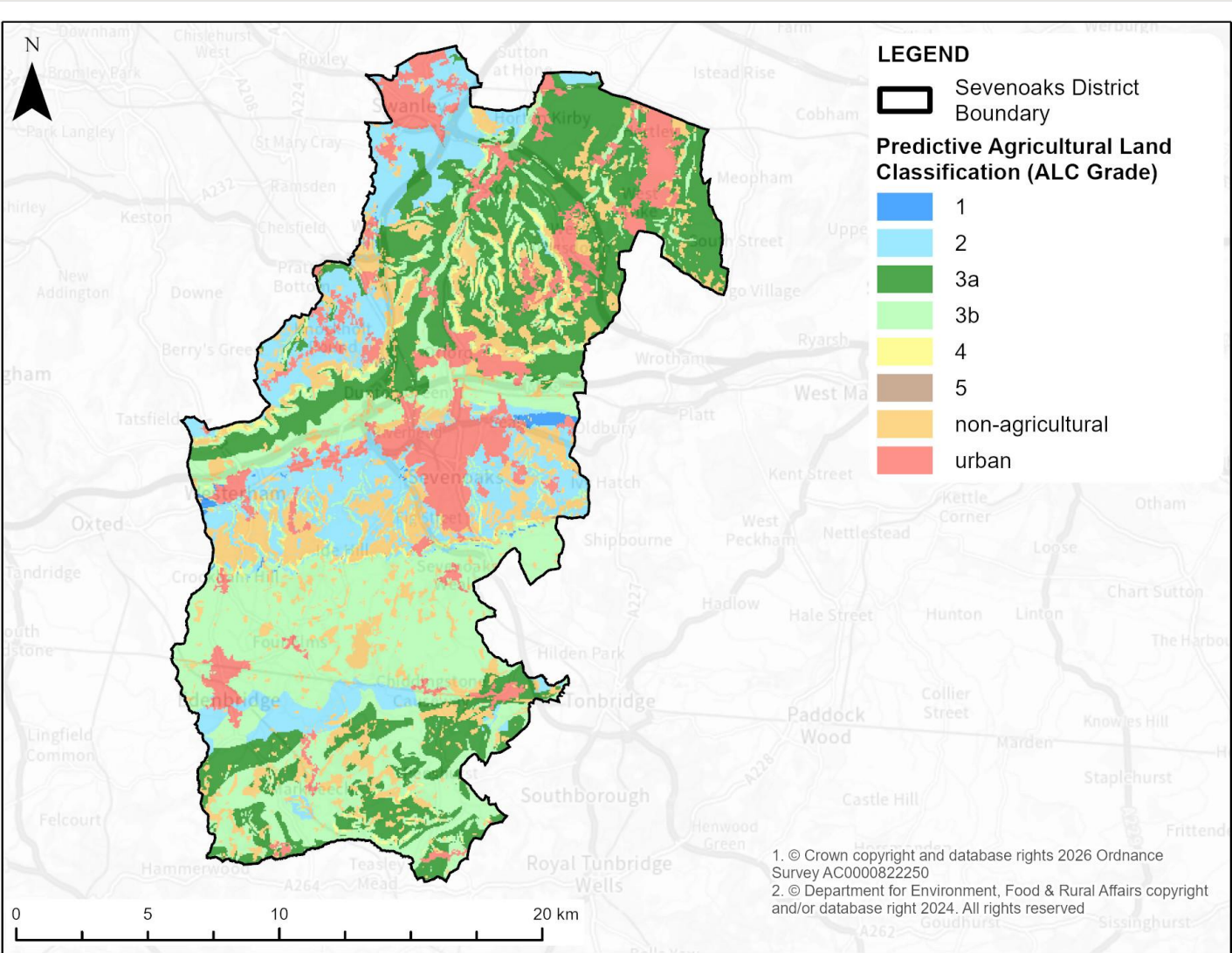
 **Areas of Critical Importance for Biodiversity (ACIBs):** Large parcels of land identified where targeted nature recovery actions would have the most impact. As the map shows, coverage across Sevenoaks District is extensive.

 **Opportunity for Solar Developers:** Solar schemes located within or adjacent to ACIBs present a genuine opportunity to contribute to nature recovery targets. This should be treated as a design asset, not an afterthought.



Agricultural Land Classification

Solar development should avoid the best agricultural land where possible. Grades 1, 2 and 3a are classified as Best and Most Versatile (BMVAL). Grade 1 & 2 are excluded from the developable area maps in this study.



Category	Land Quality	BMVAL
1	Excellent	Yes
2	Very Good	Yes
3a	Good	Yes
3b	Moderate	No
4	Poor	No
5	Very Poor	No
Non-Agricultural	N/A	No
Urban	N/A	No

BMVAL use is not an absolute prohibition - development on grades 1, 2 & 3a can proceed with robust justification. Recent case law provides multiple examples of rulings in favour of building solar PV on land classified as BMVAL.

Grid Constraints

Grid connection is the developer's responsibility, not SDC's. The map shows available capacity across substations in and around the District.



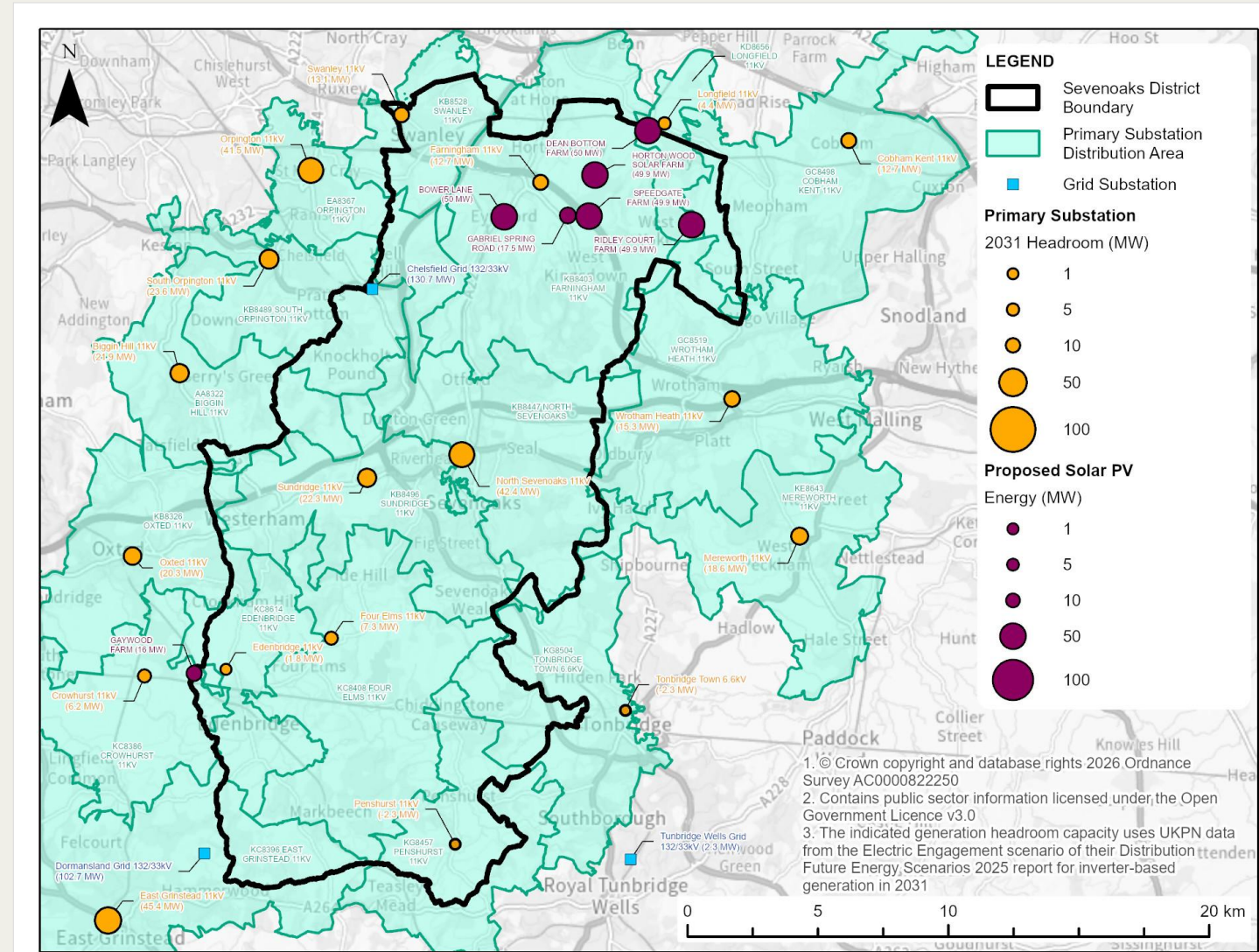
Generally positive picture: No major constraints for solar PV and battery connection across most of the District at the time of writing.



Three substations with significant capacity (>15MW): Chelsfield Grid, North Sevenoaks and Sundridge can accommodate large-scale connections without reinforcement works.



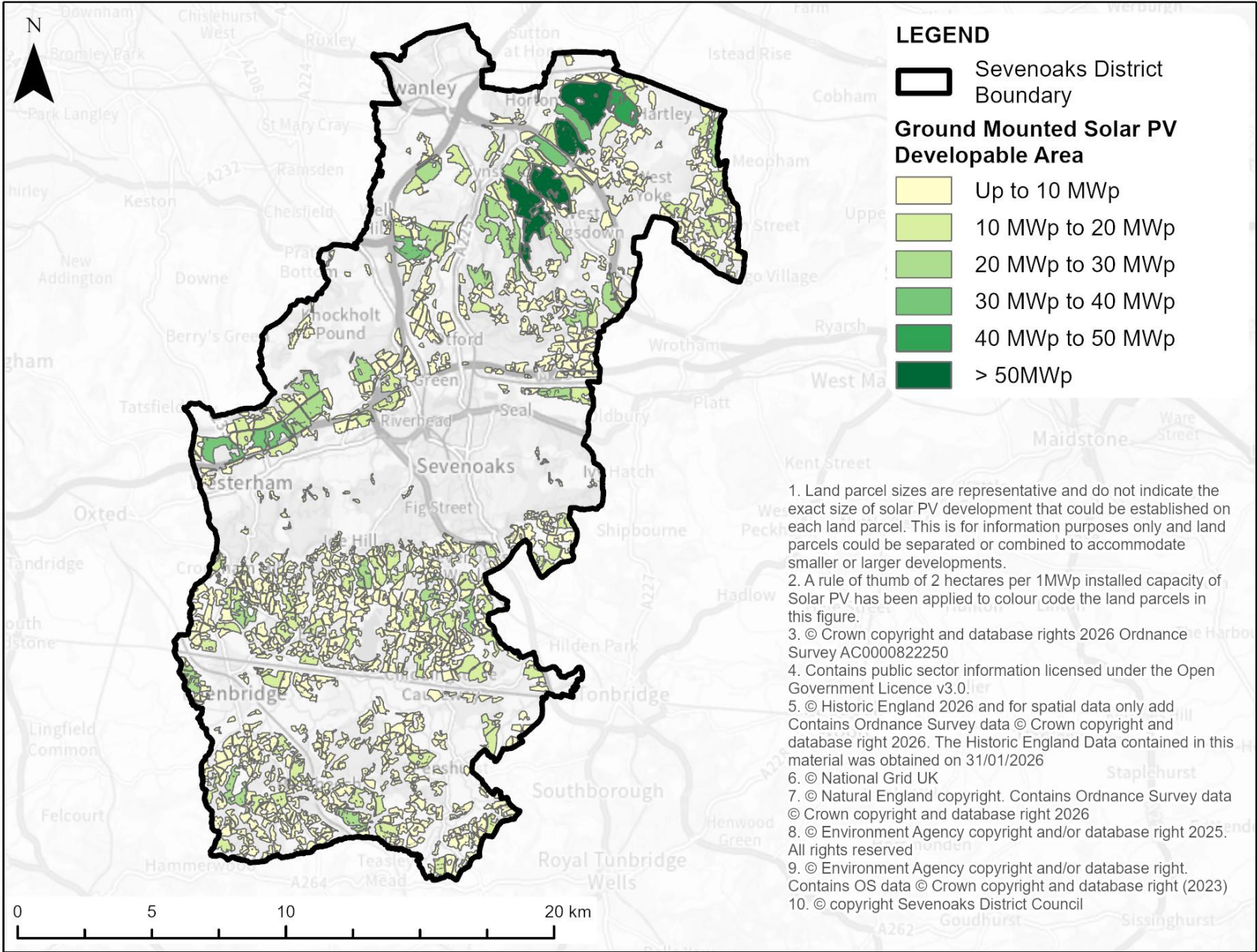
Penshurst - key gap in the south: The only primary substation in the southeast of the District currently has no available capacity. A significant constraint for any developer looking at land in that area.



Potentially Suitable Areas For Solar PV Development

National Landscapes Included

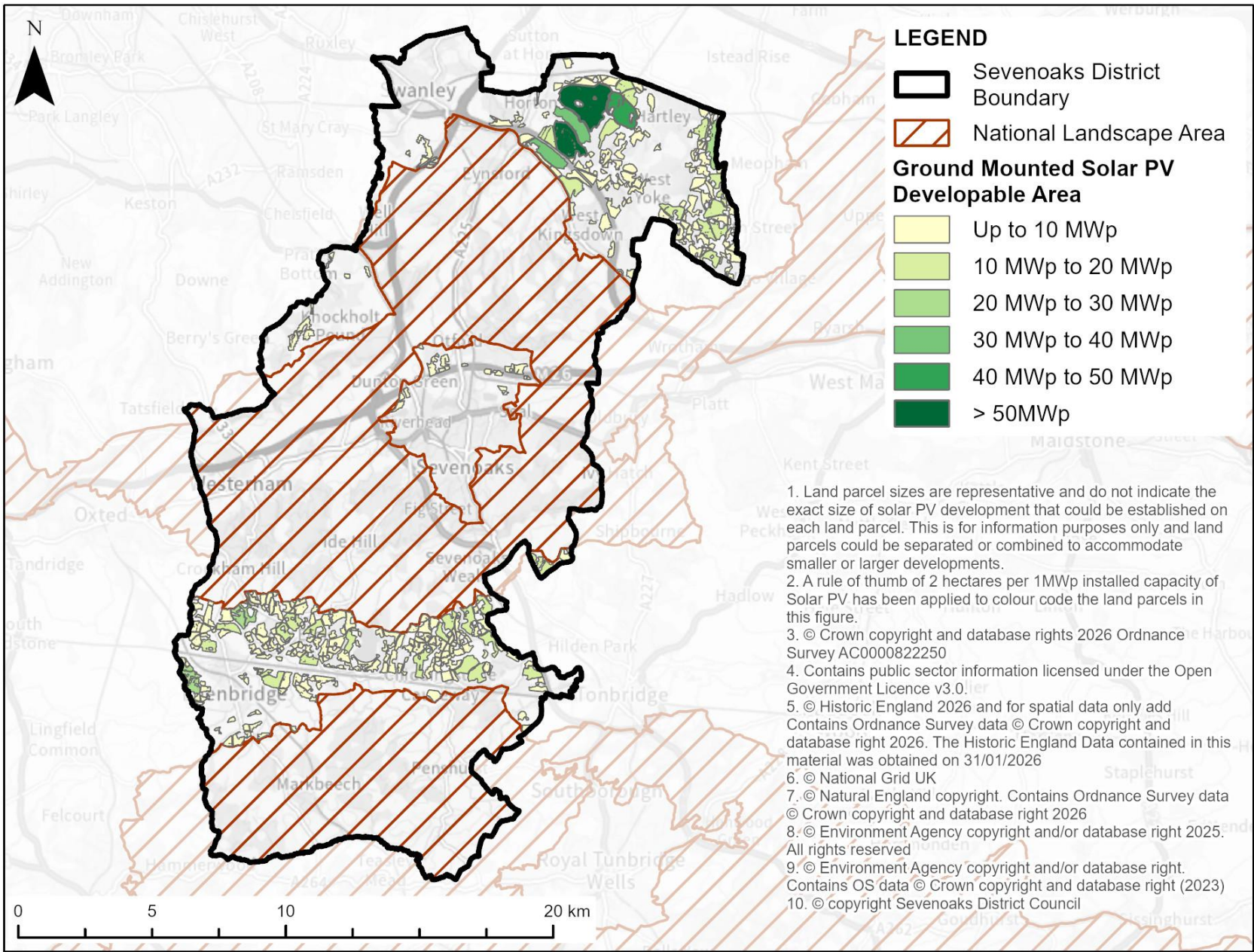
Scenario A: assumes solar development above 1MWp is permitted within National Landscape designated areas.



Potentially Suitable Areas For Solar PV Development

National Landscapes Excluded

Scenario B: assumes National Landscape areas are fully excluded from solar development, without exception.





Energy Generation & Carbon Savings

Quantifying the potential contribution of ground-mounted solar PV to Sevenoaks District's energy and climate goals



Energy Generation Potential



10,120 ha

Total developable area
identified



223,700 GWh

Potential lifetime energy
generation



67.8M homes

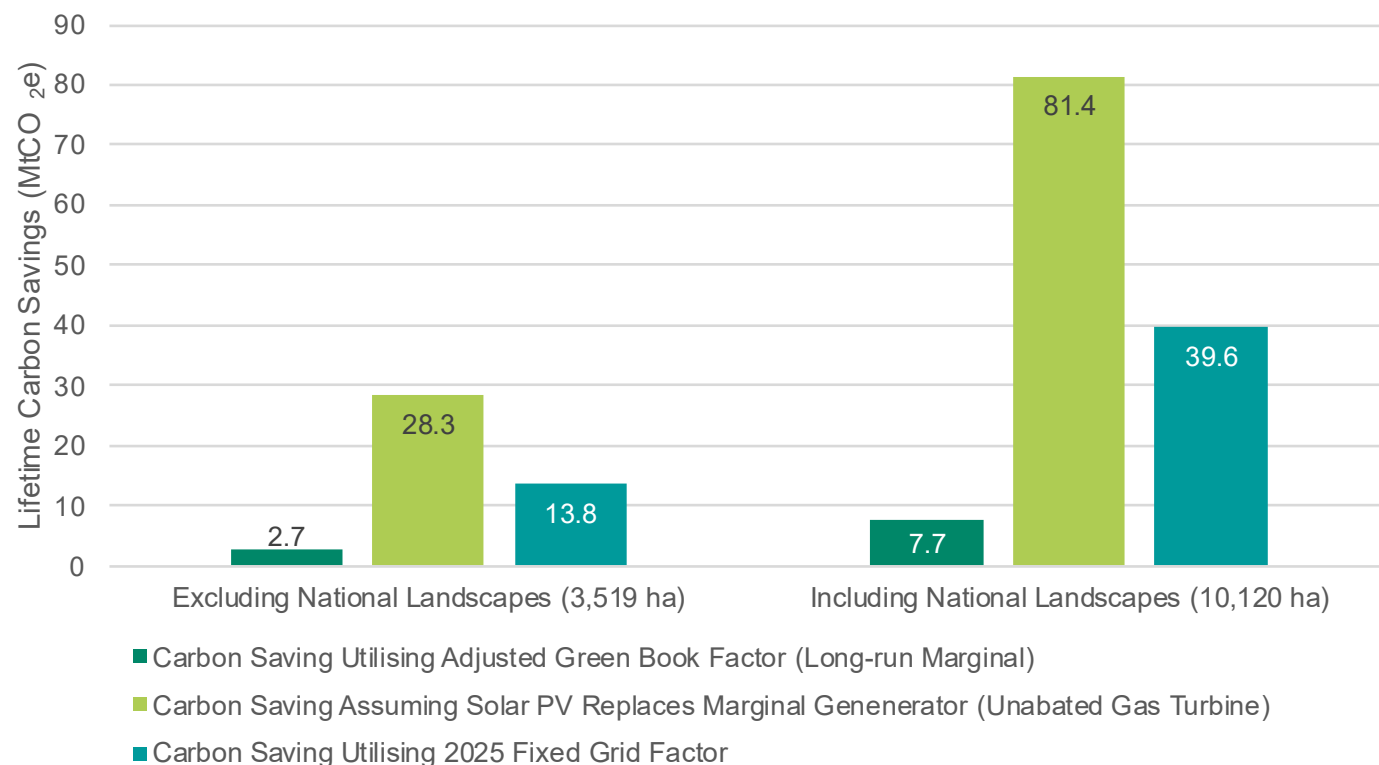
Powered over 40 years (incl.
National Landscapes)

Excluding National Landscape areas reduces this to **23.7M homes** over the same period.

*These figures represent a theoretical maximum assuming all identified land is developed. In practice not all areas will be developed for solar PV.

Lifetime Carbon Savings

Carbon savings range from 21 million to over 230 million tonnes of CO₂ over the project lifetime, depending on how the UK grid evolves.



Fire Safety

General guidance summarising current fire safety considerations, industry standards and good practice relevant to solar PV and BESS developments



Note: The information provided in Section 4 is intended as guidance on current fire safety good practice for solar PV and battery energy storage systems (BESS). It is included for awareness purposes only and has not been used to identify or assess potentially suitable areas for development. Appropriate fire safety measures, supported by site-specific assessments and prepared by suitably qualified professionals, will be required as part of any future planning application.

Fire Safety – Solar PV

Ground mounted solar PV systems are generally considered as a low-risk technology, when designed, installed and maintained in accordance with applicable standards and industry best practice, keeping the likelihood of fire low and facilitating emergency response.

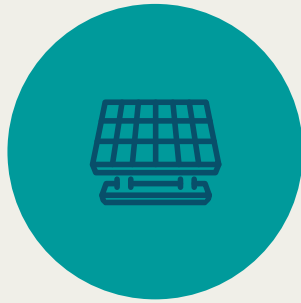
Principal Fire Hazards

- Electrical faults
- Equipment failures
- Installation defects

Mitigation Strategies Included in Design



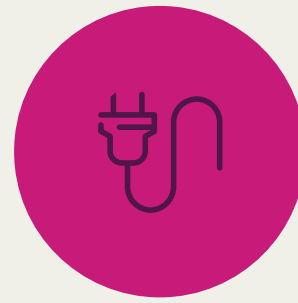
Equipment
quality and
certification



Optimised site
layout for fire
services access
and fire
containment



Frequent
installation and
construction
checks



Installation of
cable and
electrical
protection



Continuous
monitoring and
maintenance



Embedded fire
prevention and
protection

Fire Safety – Battery Energy Storage Systems

Battery Energy Storage Systems (BESS) are designed to operate safely, and when built and managed in line with recognised standards and industry best practice, such as the National Fire Chief's Council (NFCC) and British Standards, the risk of fire is low, with measures in place to support emergency response if required. Safety features should be built in at multiple levels to quickly detect and control any risk, with systems identifying early signs to prevent overheating.



Compliance

The NFCC promotes the development of an Outline Battery Safety Management Plan to support safe operation. This allows responders to be aware of safe access routes and key details about the facility and operation.

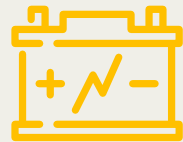
Prevention of System Failure

Manufacturing faults are protected by quality processes and the Battery Management System during operation. Regular maintenance also reduces risk.



Prevention of Thermal Failure

Choosing more stable battery chemistries, a temperature and gas detection system and including backup systems helps reduce risk.



Prevention of Electrical Failure

Control systems should be continuously monitoring battery conditions and utilise automatic circuit breakers to protect equipment during a fault condition.



Fire and Explosion Control

Multiple layers of safety are used to detect, isolate, cool and contain any incidents. Units are designed by the manufacturer to contain any fire within the unit to prevent further spread.

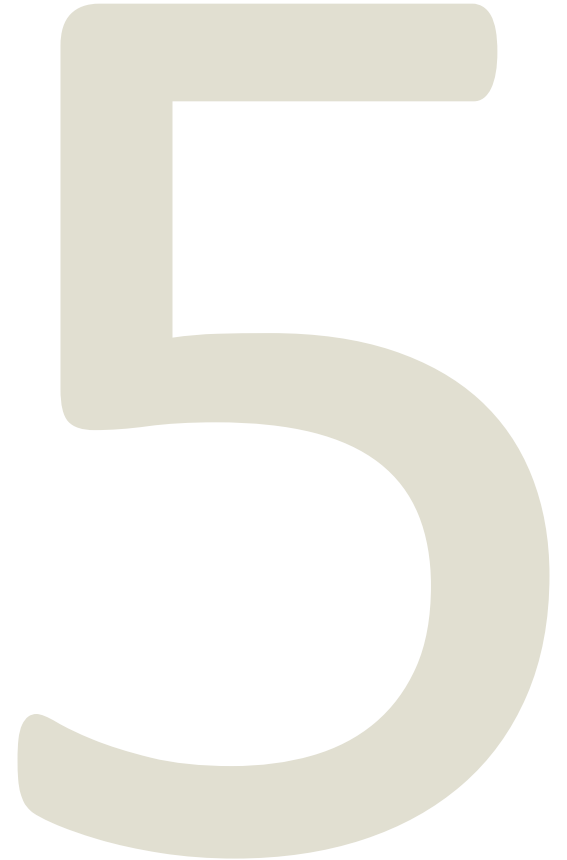
Prevention of Electric Shock

Electrical protection equipment should disconnect and isolate from the grid. The BESS should be disconnected, and any exposed cables or equipment should be treated as “live”. A controlled burn strategy should be adopted.



Conclusion

Key findings and implications for SDC's emerging solar PV planning policy



Conclusions

- 1 Significant potential exists despite constraints** Even after excluding protected land and best agricultural land, a large portion of the District remains potentially suitable for medium-scale solar PV development.
- 2 Strong evidence base for the Local Plan** This study provides the analysis and strategic mapping SDC can utilise as a source when developing a dedicated solar PV policy aligned with the latest national guidance.
- 3 Solar can deliver wider environmental benefits** Well-designed schemes can support ongoing agricultural activity and enhance local biodiversity – solar PV and nature recovery are not mutually exclusive.
- 4 Practical tools for managing applications** The constraint mapping gives SDC a clear framework to proactively assess applications and prioritise only the most suitable sites.
- 5 Each application must be assessed individually** Site-specific surveys and stakeholder engagement will be essential - this study is a strategic guide, not a site approval.