Data-Centre Policy Paper

We recognise that data centres support public services, commerce, research and the digital economy. Nevertheless, their national importance must not permit their environmental and infrastructure costs to be transferred to host communities or the public purse.

Large data centres are intensive industrial developments. They can occupy extensive sites, operate continuously, consume substantial quantities of electricity and water, generate persistent mechanical noise and waste heat, require substations and backup generators, and introduce large buildings and security lighting into landscapes that may previously have been relatively tranquil dark skies in rural areas. Water UK[1] has issued a warning that, "A critical policy gap exists as current national water resource plans, including those finalised in 2025 by water companies, do not adequately account for the burgeoning demand from infrastructure such as AI data centres. This oversight risks intensifying water stress in already vulnerable regions."

We therefore ask the Government to introduce a **National Data-Centre Planning and Environmental Standard**, applying to all new data centres and major extensions. The new National Policy Statement for Data Centres should include this standard.

The standard should contain the following requirements.

1. A plan-led, brownfield-first approach

Data centres should be directed first to existing employment areas, previously developed land, redundant industrial premises and suitably located degraded or contaminated sites.

Every greenfield proposal should be accompanied by an independently verifiable sequential site assessment demonstrating:

1. the geographical area within which the facility genuinely needs to be located;
2. the brownfield, industrial and allocated employment sites considered;
3. why each alternative is unavailable, unsuitable or unviable;
4. whether the proposal could be divided between more than one site; and
5. why grid, fibre or land-cost considerations outweigh the environmental and community consequences of the selected site.

The availability of a convenient grid connection or inexpensive farmland should not, by itself, justify development on greenfield land. High-quality agricultural land, protected landscapes, important habitats, flood-risk areas should be avoided. The cumulative effect of existing, consented and proposed data centres must be considered at regional level rather than treating each application in isolation.

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1 https://assets.publishing.service.gov.uk/media/688cb407dc6688ed50878367/Water_use_in_data_centre_and_AI_report.pdf

2. Complete and transparent application information

No application or development consent order should be approved without adequate information about:

- a genuine assessment of alternative options;
- total site area, building dimensions and maximum equipment heights;
- expected IT capacity and total electricity demand at opening and full build-out;
- grid connection and reinforcement requirements;
- water source, peak and annual water consumption and wastewater discharge;
- cooling technology;
- emergency generator numbers, fuel, emissions and testing arrangements;
- operational noise;
- waste-heat quantity, temperature and reuse potential;
- expected employment during construction and operation;
- landscape, visual and residential amenity effects; and
- cumulative effects with other data centres and infrastructure.

Commercial confidentiality should not be accepted as a reason for withholding the information necessary to assess environmental effects and infrastructure capacity. The Local Government Association[2] has identified the absence of site-specific and verifiable energy, water and emissions data as a serious obstacle to proper local decision-making.

3. Landscape and residential visual amenity

Every proposal should include a proportionate Landscape and Visual Impact Assessment or landscape and visual appraisal, together with a **Residential Visual Amenity Assessment screening report**.

A full RVAA should be mandatory for every dwelling or residential group where the screening identifies a credible risk that the scale, proximity, massing, lighting, plant, security infrastructure or cumulative development could:

- dominate or overwhelm the outlook;
- create an overbearing industrial environment;
- materially change the character of a home or garden; or
- approach the Residential Visual Amenity Threshold.

Assessments must show the development at maximum approved dimensions and include verified photomontages, winter views, night-time visualisations and cumulative views. Landscaping should not be treated as effective mitigation until it has realistically reached the size and density shown.

[2] https://www.local.gov.uk/parliament/briefings-and-responses/local-government-response-sustainability-data-centres-uk

Any proposed building that is visually dominant must be supported by a functional screening plan (this does not mean planting whips that will take 20 years to grow to full height).

4. Strict noise limits and independent monitoring

Applications should include a representative baseline noise survey covering weekdays, nights and weekends and, where necessary, different seasons and weather conditions.

The assessment must include all cooling plant, fans, transformers, substations, pumps, air-handling equipment, vehicle movements and generator testing, including the cumulative effect of every phase of the development.

As a normal minimum standard:

- the BS 4142 rating level from operational plant should be at least **5 dB below the representative background sound level** at the nearest noise-sensitive premises;
- more stringent limits should apply in quiet rural or tranquil areas and where low-frequency, tonal, impulsive or intermittent characteristics are present;
- compliance should be demonstrated for the worst-case operating and weather conditions;
- routine generator testing should take place only between 09:00 and 17:00 on weekdays, excluding bank holidays;
- testing should be limited to no more than one hour per month or 12 hours per year;
- emergency generators should be used only for genuine grid failures and necessary safety testing, not commercial electricity generation or routine peak-market participation; and
- post-completion compliance testing and ongoing monitoring should be funded by the operator and reported publicly.

These are realistic requirements. A Hillingdon data-centre permission[3] required operational noise to remain 5 dB below background at the nearest sensitive premises, with testing restricted to one hour per month during weekday daytime hours. Another data-centre decision limited generator testing to 12 hours annually.

5. Construction and operational working hours

- Construction should be limited to 08:00–18:00 Monday to Friday and 08:00–13:00 on Saturdays;
- there should be no construction, piling, demolition, HGV deliveries or routine plant testing on Sundays or bank holidays;
- abnormal loads and night-time deliveries should require individual approval and advance notification to residents; and

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3 https://planning.hillingdon.gov.uk/OcellaWeb/viewDocument?file=dv_pl_files%5C37977_APP_2023_1599%5CREP-1012264-LR-20221006-Planning+discharge+survey+report-Rev00.pdf&module=pl

- a construction liaison group and publicly accessible complaints contact should operate throughout construction.

A Construction Environmental Management Plan should contain enforceable limits for noise, vibration, dust, lighting, HGV numbers, routes, parking and road cleaning.

Any temporary road schemes that are required to support construction must comply with full planning application requirements (no permitted development rules).

6. Dark-sky and lighting controls

All external lighting should be subject to an approved lighting strategy containing lux contour plans and technical specifications.

The standard should require:

- fully shielded, downward-directed fittings with no avoidable upward light;
- the warmest practicable colour temperature, normally no more than 2700K and lower near sensitive habitats or dark landscapes;
- no decorative façade or roof lighting;
- motion sensors and dimming outside essential working areas;
- a night-time lighting curfew, with only the minimum security lighting remaining;
- protection of bat routes, hedgerows, watercourses and other dark ecological corridors; and
- post-installation verification at site boundaries, habitats and nearby homes.

A data-centre permission at Court Lane, Iver, already required a lighting design strategy supported by contour plans and specifications demonstrating protection of bat territory.

7. Water-neutral or near-water-neutral operation

A national standard should establish measurable outcomes:

- no use of potable mains water for routine cooling where dry, closed-loop or reclaimed-water systems are technically feasible;
- closed-loop, dry or hybrid cooling as the default;
- reclaimed wastewater, rainwater and other non-potable supplies to be considered before mains water;
- a maximum annual water budget and peak daily abstraction figure;
- a Water Use Effectiveness target appropriate to the technology and location;
- separate metering of cooling, sanitary and landscaping consumption;
- a drought and heatwave operating plan;
- no occupation until water and wastewater capacity have been confirmed; and
- annual publication of actual water withdrawal, consumption, discharge and Water Use Effectiveness;
- no data centres in water stressed regions.

8. Mandatory waste-heat assessment and reuse

Every data centre above 1 MW should be required to prepare an independently reviewed heat-reuse feasibility study and cost-benefit assessment.

The development should be designed from the outset to:

- capture waste heat at the highest practicable temperature;
- provide heat exchangers and heat-recovery plant;
- reserve space for heat pumps, thermal storage and network equipment;
- safeguard pipe corridors through the site;
- provide an accessible connection point at the site boundary; and
- publish the amount and temperature of heat available throughout the year.

Where an existing or committed heat network or suitable user is available, connection and supply should be required through a planning obligation. Where no network yet exists, the data centre should be made **heat-reuse ready**, with a binding trigger requiring connection when a technically and economically viable network becomes available.

The operator should fund the heat-capture and site-side connection infrastructure attributable to its development. It would not always be lawful or reasonable to require one operator to finance an entire district heating network serving a much wider area.

There is a strong international precedent. The EU Energy Efficiency Directive requires data centres with rated input above 1 MW to use waste heat where technically and economically feasible. Germany has introduced staged energy-reuse requirements. The UK still has little legislation specifically mandating data-centre heat recovery, although the Greater London Authority[4] has set out recommendations for the optimum cases for heat reuse, covering technical solutions and commercial options.

Data centres above 1 MW should recover and use their waste heat unless an independently verified assessment demonstrates that reuse is not technically or economically feasible.

9. Solar generation, living roofs and living walls

All data centres should be required to follow an energy and roof-use hierarchy:

1. minimise total electricity and peak demand;
2. maximise rooftop and parking-canopy solar generation;
3. incorporate battery storage where it provides demonstrable grid and carbon benefits;
4. use biosolar roofs, combining photovoltaic panels with suitable green-roof planting;
5. provide green roofs or walls on remaining suitable areas; and

[4] https://www.london.gov.uk/sites/default/files/2025-06/Optimising_Data_Centres_in_London_-_Heat_Reuse_250605.pdf

6. justify every technically suitable area left unused.

Local planning policy can require these features. London's planning framework, for example, requires major development to maximise on-site renewable energy, monitor performance and incorporate urban greening. Its Urban Greening Factor[5] expressly anticipates structural provision for green roofs and green walls.

Living walls should be considered. Any living-wall condition should secure:

- a detailed planting and irrigation specification;
- a non-potable water source;
- long-term maintenance and replacement;
- fire-safety compliance; and
- remedial action if agreed coverage is not achieved.

Green roofs, walls and solar installations must not be used as substitutes for statutory biodiversity net gain, landscape mitigation or necessary tree planting.

10. Clean and additional energy supply

Data centres should be required to maximise on-site and directly connected renewable power:

- maximum technically feasible rooftop and parking-canopy solar;
- a minimum proportion of total site electricity from on-site or directly connected new renewable generation;
- independently verified Power Usage Effectiveness and peak-demand targets;
- remaining electricity to be supported by additional new renewable or low-carbon generation through a private wire or credible long-term supply arrangement;
- transparent reporting of the location and additionality of that generation;
- no counting of diesel or unabated gas generation as low carbon; and
- no assumption that annual certificates compensate for high-carbon electricity use at times when renewable generation is unavailable.

Planning precedent already exists for requiring decentralised or renewable energy: the Court Lane data-centre permission required at least 10% of regulated energy from decentralised, renewable or low-carbon sources. However, a future national standard should apply to **total operational electricity**.

[5] https://www.london.gov.uk/publications/urban-greening-factor

11. Public reporting and enforceable performance

Operators should publish annual, site-specific data covering:

- total electricity consumption and peak demand;
- Power Usage Effectiveness;
- water withdrawal, consumption and Water Use Effectiveness;
- waste heat available and reused, expressed through an Energy Reuse Factor;
- on-site renewable generation;
- generator testing and emergency operating hours;
- generator fuel consumption and emissions;
- operational noise-monitoring results; and
- progress against planning conditions and section 106 obligations.

Permissions should include corrective-action provisions where predicted performance is not achieved. Reporting must relate to the individual site, rather than relying on global corporate averages.

12. Community accountability

Each major data centre should establish a community liaison group, a named local contact and a time-limited complaints procedure. The operator should fund independent monitoring where impacts cannot otherwise be adequately enforced.

Community funds, business rates, jobs or voluntary benefits must not be treated as compensation for unacceptable environmental harm.

Where communities are adversely affected there must be a clear compensation process such as an extension to the existing government scheme[6] which applies when communities are affected by road schemes adjacent to their homes.

A decommissioning and reuse plan should be approved before occupation, supported by appropriate financial security where necessary, so that obsolete equipment and hazardous materials are removed and the building and site can be reused rather than abandoned.

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[6] https://www.gov.uk/compensation-road-property-value