BIOSOLAR
HUB

BSH GUIDE

BIOSOLAR PRE-DESIGN CHECKLIST

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BIOSOLAR PRE-DESIGN CHECKLIST

For architects, designers, specifiers, and contractors beginning early-stage biosolar roof planning.

PROJECT INFORMATION

- [ ] Project Name
- [ ] Site Address
- [ ] Building Type (Commercial / Industrial / Residential / Public Sector)
- [ ] New build or retrofit
- [ ] Contact details for design lead

ROOF STRUCTURE & SUITABILITY

Structural Capacity

- [ ] Existing structural engineer's report available
- [ ] Roof can support additional dead load of the green roof + PV system
- [ ] Point load capacity understood
- [ ] Snow loading and wind loading considerations flagged

Roof Form

- [ ] Flat or shallow pitch (0–5° ideal for biosolar)
- [ ] Roof area free from obstructions
- [ ] Adequate parapet height and/or edge restraints possible

Access & Safety

- [ ] Safe roof access for installation & maintenance
- [ ] Walkway zones identified
- [ ] Fall protection strategy defined

WATERPROOFING & ROOFING BUILD-UP

Waterproofing Layer

- [ ] Waterproofing type confirmed (e.g., bitumen, PVC, TPO, cold-applied)
- [ ] Manufacturer approval for biosolar + green roof integration
- [ ] Root-resistant layer confirmed or required

Protection & Drainage

- [ ] Protection fleece required
- [ ] Drainage board requirement identified
- [ ] Outfalls and upstands mapped
- [ ] Blue roof compatibility (if relevant) confirmed

VEGETATION & GREEN ROOF REQUIREMENT

Vegetation Type

- [ ] Sedum
- [ ] Meadow / Wildflower
- [ ] Biodiverse / Brown roof
- [ ] System depth feasible (40-150mm depending on vegetation type)

Establishment & maintenance

- [ ] Irrigation strategy confirmed (temporary or permanent)
- [ ] Maintenance access routes planned
- [ ] Fire breaks / pebble zones included

SOLAR PV REQUIREMENTS

PV strategy

- [ ] PV system required as part of sustainability/ESG targets
- [ ] Target output (kWp) defined
- [ ] Orientation and shading constraints reviewed
- [ ] Specialist Biosolar installation company recommended

Mounting method

- [ ] Biosolar mounting system preferred (ballast-integrated)
- [ ] No roof penetrations required
- [ ] Panel height compatible with vegetation type

Electrical considerations

- [ ] Cable routing plan identified
- [ ] Inverter location(s) confirmed
- [ ] DC/AC cable containment suitable for green roof environment

DRAINAGE & WATER MANAGEMENT

- [ ] Drainage outlets mapped and protected
- [ ] Allowance for temporary water retention
- [ ] Compatibility with SuDS strategy (if applicable)
- [ ] Maintenance access to outlets secured

COMPLIANCE, FIRE AND WIND

Regulatory alignment

- [ ] GRO Guidance reviewed
- [ ] RC62 requirements reviewed
- [ ] Approved Document B (fire) considerations included
- [ ] Approved Document O (overheating) benefits understood

Fire compliance

- [ ] Fire breaks designed per GRO + RC62
- [ ] Vegetation zones match the fire strategy
- [ ] Maintenance plan established for ongoing fire safety

Wind uplift

- [ ] Wind zone identified (Eurocode or manufacturer)
- [ ] Ballast requirements acknowledged
- [ ] Edge zone reinforcement required?


BIOSOLAR
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We’re here to accelerate the transition to buildings that give back more than they take – powering cities and restoring nature, one rooftop at a time.
Powering a sustainable future.