

SHETLAND'S LOCAL PLACE PLANS

Leaflet 21 - A Utilities and Infrastructure Perspective

Why should we think about utilities and infrastructure?

Even the best development idea needs water, power, drainage, communications and access to work successfully.

Local Place Plans (LPPs) are not expected to carry out detailed infrastructure assessments. However, thinking about infrastructure at an early stage can help communities identify opportunities, avoid unrealistic proposals, and develop projects that are more likely to succeed.

In rural Shetland, infrastructure constraints can sometimes be a bigger challenge than the availability of land itself.

How do utilities and infrastructure affect land use and buildings?

- New homes, businesses and community facilities often require connections to water, sewerage, electricity and communications networks.
- Existing networks may have limited spare capacity.
- Remote locations may require new infrastructure or alternative solutions.
- Infrastructure costs can sometimes determine whether a project is viable.
- Shared community infrastructure can create opportunities that individual developments could not achieve alone.

Key concepts

Capacity: The amount of additional demand a utility network can accommodate.

Connection: Linking a development to existing utilities such as water, electricity, sewerage or broadband.

Resilience: The ability of infrastructure to continue functioning during storms, power cuts or emergencies.

Off-Grid Solutions: Systems that operate independently of public utility networks.

Shared Infrastructure: Facilities used by multiple homes, businesses or community buildings such as a district heating system, community battery, shared wastewater treatment plant or private water supply.

What does this look like in Shetland?

- Some rural areas have no public sewerage network.
- Not all sites are connected to the public water network.
- Electricity networks may require reinforcement before significant new development can proceed.
- Mobile phone and broadband coverage can vary considerably between communities.
- Storms can affect power supplies, communications and transport links.
- Long distances between properties can make conventional infrastructure expensive.
- Small-scale community solutions are sometimes more practical than extending existing networks.

Things to think about when planning land and buildings

Water Supply

- Is a public water supply available nearby?
- Can existing infrastructure accommodate additional demand?
- Would a private or shared water supply be necessary?
- Are there any known water quality or resilience issues?

Wastewater and Drainage

- Is there a public sewer available?
- Would individual septic tanks or treatment systems be required?
- Could a shared treatment solution serve several properties?
- How will surface water be managed sustainably?

Electricity

- Is there a nearby electricity connection?
- Could additional development require network upgrades?
- Is there potential for local renewable generation?
- Could battery storage improve resilience?

Heat

- Can buildings be designed to minimise heating demand?
- Could heat pumps be supported?
- Might several buildings benefit from a shared heating system?
- Could waste heat from local activities be used?

Digital Connectivity

- Is broadband sufficient for modern home, education and business use?
- Is mobile coverage reliable?
- Would additional digital infrastructure be beneficial?

Community Resilience

- Would the proposal increase reliance on vulnerable infrastructure?
 - Are there opportunities for backup power, communications or water supplies?
 - Could community facilities play a role during emergencies?
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Examples

- A housing proposal is relocated closer to existing water, sewerage and electricity infrastructure to reduce costs and increase deliverability.
 - Several new homes share a small wastewater treatment system instead of installing separate septic tanks.
 - A community hub incorporates solar generation and battery storage to act as a resilience centre during power outages.
 - A housing development includes a shared ground-source or air-source heat network.
 - A rural business hub combines office space, broadband infrastructure and community energy generation.
 - A Local Place Plan identifies areas where infrastructure improvements are needed before development can proceed.
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Possible Local Place Plan Policy Ideas

Local Place Plans can suggest actions and policies as well as sites for development. Communities may wish to explore:

Shared Infrastructure

Support for shared water supplies, wastewater treatment systems, district heating schemes, battery storage and community energy projects where these can improve resilience and reduce costs.

Infrastructure First

New development should be supported where infrastructure capacity exists or can be provided without unacceptable impacts on existing users.

Community Resilience Infrastructure

Encourage community facilities to incorporate backup power, communications and emergency support functions where practical.

Future-Proofing

New developments should be designed to accommodate renewable energy technologies, electric vehicle charging, modern communications infrastructure and future adaptation requirements.

A quick reality check for community proposals

- Before including a site or project in your Local Place Plan, ask:
 - Is there a realistic water supply?
 - Is wastewater treatment possible?
 - Is electricity available?
 - Is heating affordable and sustainable?
 - Does broadband and mobile coverage meet likely needs?
 - Can the infrastructure cope with future growth?
 - If not, are there realistic community, shared or off-grid alternatives?
 - If most of the answers are "yes", your idea may be more deliverable than you think.
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For information and support

- [Scottish Water](#)
- [Scottish Water Development Services](#)
- [SSEN Distribution](#)
- [Community Energy Scotland](#)
- [Local Energy Scotland](#)
- [Ofcom Mobile and Broadband Checker](#)
- [Shetland Islands Council](#)
- [Voluntary Action Shetland](#)