

LIDSEY DRAINAGE IMPACT ASSESSMENT

Planning Application for Replacement Extension

Ballina, The Street, Walberton, Arundel, West Sussex

1. Introduction

This Lidsey Drainage Impact Assessment (LDIA) has been prepared in support of a planning application for the proposed replacement extension at **Ballina, The Street, Walberton, Arundel**.

The site lies within the catchment of the **Lidsey Wastewater Treatment Works (WWTW)**, where Arun District Council requires development proposals to demonstrate how foul and surface water drainage will be managed and what measures will be implemented to reduce impacts on the wider drainage network and catchment. The requirement arises due to historic foul sewer flooding and drainage capacity issues within the Lidsey catchment.

This assessment has been prepared in accordance with:

- Arun Local Plan Policy W DM1;
 - Arun District Council guidance relating to the Lidsey WWTW Catchment Area;
 - National Planning Policy Framework (NPPF);
 - Non-Statutory Technical Standards for Sustainable Drainage Systems (SuDS);
 - CIRIA SuDS Manual (C753).
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2. Site Description

Site Address: Ballina, The Street, Walberton, Arundel, West Sussex

The proposal comprises the replacement of an existing extension with a new extension serving the existing dwelling.

The proposal does not create any additional dwelling units and will remain in use as a single private residence.

The site is located within the Lidsey Wastewater Treatment Works catchment area, which includes Walberton and surrounding settlements.

3. Existing Drainage Arrangements

Foul Water

The existing dwelling is served by existing foul drainage arrangements which discharge to the public foul sewer network within the Lidsey catchment.

The proposed replacement extension will continue to utilise the existing foul drainage connection.

Surface Water

Surface water from the existing roof and hardstanding areas currently drains via a combination of permeable garden areas and existing drainage infrastructure within the site.

The replacement extension is proposed on the footprint of an existing extension and therefore will not materially increase the impermeable area of the site.

4. Lidsey Catchment Context

Arun District Council identifies the Lidsey catchment as an area that has historically experienced foul water flooding, sewer surcharge events and pollution incidents resulting from:

- groundwater infiltration into foul sewers;
- surface water entering the foul sewer network;
- direct surface water connections to foul sewers; and
- capacity exceedance within watercourses and drainage systems.

The Lidsey Surface Water Management Plan (SWMP) recommends that development proposals contribute towards reducing pressure on the drainage network through sustainable drainage measures and by minimising unnecessary discharge to the sewerage system.

5. Assessment of Drainage Impact

Foul Water Impact

The proposal is for a replacement extension to an existing dwelling and does not create additional residential units.

Consequently:

- no significant increase in foul water generation is anticipated;
- occupation levels are expected to remain substantially unchanged;
- the proposal will not materially increase loading on the Lidsey wastewater network.

The impact on foul drainage infrastructure is therefore considered negligible.

Surface Water Impact

The proposal replaces existing built development and is not expected to result in any significant increase in impermeable area.

Nevertheless, the applicant proposes a range of measures to reduce surface water runoff from the site and contribute positively to catchment-wide drainage objectives.

As a result, the proposal is expected to have a neutral or slightly beneficial effect on the drainage characteristics of the site.

6. Proposed Mitigation Measures

To comply with the objectives of the Lidsey Surface Water Management Plan and Arun District Council requirements, the applicant will implement the following measures where practicable:

Foul Water Measures

1. Retention of Existing Foul Connection

- Existing foul drainage infrastructure will be retained and utilised.
- No surface water will be connected to the foul sewer network.

2. Water Efficiency Measures

- Installation of dual-flush WCs.
- Low-flow taps and shower fittings.
- Water-efficient appliances where replacement is required.

3. Reduction in Wastewater Generation

- Water-saving fixtures will reduce overall foul water discharge volumes to the public sewer.

Surface Water Measures

1. Sustainable Drainage Principles

- Surface water will be managed in accordance with the SuDS hierarchy wherever feasible.

2. Rainwater Disposal at Source

- Roof water will discharge to permeable garden areas or other suitable on-site drainage features where practicable.

3. Permeable Surfaces

- Any replacement hardstanding associated with the development will utilise permeable construction where feasible.

4. Rainwater Harvesting

- Installation of water butts connected to roof drainage to capture and reuse rainwater for garden irrigation.

5. Reduction in Surface Water Runoff

- The design seeks to maintain or reduce runoff rates compared with the existing situation.

6. Separation of Drainage Systems

- Surface water drainage and foul drainage systems will remain fully separated to prevent additional flows entering the public foul sewer network.

7. Water Quality Considerations

The proposed development is domestic in nature and is not expected to generate pollutants that would adversely affect groundwater, watercourses or receiving environments.

The proposed drainage strategy will:

- maintain separation of foul and surface water systems;

- reduce the risk of contaminated runoff entering drainage networks;
- promote infiltration and attenuation where appropriate;
- support the objectives of the Lidsey Surface Water Management Plan.

Accordingly, the proposal is not expected to have any adverse effect on water quality.

8. Compliance with Lidsey Surface Water Management Plan

The proposal accords with the principles of the Lidsey Surface Water Management Plan by:

- avoiding additional burden on the foul sewer network;
 - ensuring surface water is not connected to foul sewers;
 - promoting sustainable drainage measures;
 - reducing runoff through source control measures;
 - incorporating water efficiency measures to reduce wastewater generation.
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9. Conclusion

This Lidsey Drainage Impact Assessment demonstrates that the proposed replacement extension at Ballina, The Street, Walberton:

- will not create additional residential units;
- will not materially increase foul water discharge to the Lidsey catchment;
- will not significantly increase impermeable area or surface water runoff;
- will incorporate water efficiency and sustainable drainage measures;
- will maintain separation of foul and surface water systems; and
- will contribute towards the objectives of the Lidsey Surface Water Management Plan.

The proposed development is therefore considered acceptable in drainage terms and will not adversely affect the operation of the Lidsey Wastewater Treatment Works catchment or the wider drainage network.

Prepared for: Planning Application – Replacement Extension at Ballina, The Street, Walberton, Arundel.

Document: Lidsey Drainage Impact Assessment (LDIA).

Purpose: Submission to Arun District Council in support of a householder planning application.