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Flood Risk Statement & Drainage Assessment

PROPOSED EXTENSION AND INFILL EXTENSION TO EXISTING STORAGE WAREHOUSE INCLUDING NEW TWO STOREY OFFICES TO THE FRONT, RAISING THE EAVES AND RIDGE HEIGHT.

Flood Risk Statement for the Extension / Infill Extension of Part of GNG Foam Converters existing Warehouse, creating new two storey offices, including raising the eaves and ridge height. GNG Foam Converters (Lancs) Ltd, Todmorden Road, Littleborough, Lancashire, OL15 9EG.

1. Introduction

This Flood Risk Assessment (FRA) has been prepared to support the planning application for the proposed development at GNG Foam Converters. The site is located adjacent to the River Roch, which has existing flood defence walls. This document evaluates the flood risk, outlines mitigation measures, and demonstrates compliance with national and local flood risk policies.

2. Site Description

A. Location and Setting

- **Address:** GNG Foam Converters (Lancs) Ltd, Todmorden Road, Littleborough, Lancashire, OL15 9EG, Littleborough.
- **Site Area:** Approx. 1.9 hectares.
- **Proximity to River Roch:** The site is adjacent to the River Roch and a small unused portion of the site that fronts onto Todmorden Road straddles the River Roch.

B. Existing Flood Defences

- The River Roch is contained within flood defence walls approximately 1.2m – 1.5m higher than the general site level.
- These defences are designed to mitigate fluvial flooding risk from the river.

C. Topography and Drainage

- The site is relatively flat, with surface water draining towards Todmorden Road and Ebor Street.
 - Existing drainage systems include, surface water gullies, road gullies natural soakaways and the sewer network.
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3. Flood Risk Analysis

A. Sources of Flooding

1. **Fluvial Flooding (River Roch):**
 - The primary flood risk is from the River Roch.
 - The flood defence walls significantly reduce the likelihood of overtopping during flood events, with significant flood defence works on-going approx. 1 mile up stream off Todmorden Road.
2. **Surface Water Flooding:**
 - There is potential for localized surface water pooling during heavy rainfall events.
3. **Groundwater Flooding:**
 - The risk of groundwater flooding is considered low based on local geology.
4. **Sewer Flooding:**
 - No reported incidents of sewer flooding at the site, but this remains a minor potential risk.

B. Flood Zone Classification

- According to the Environment Agency Flood Map, the site is located in **Flood Zone 2**, indicating a medium probability of flooding.
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4. Flood Mitigation Measures

A. Design Measures

1. **Finished Floor Levels (FFLs):**
 - All new buildings and extensions will have finished floor levels set at least **400mm above the highest recorded flood level** to mitigate the residual risk.
2. **Building Materials:**
 - Flood-resistant materials (e.g., concrete, water-resistant insulation) will be used for construction up to the predicted flood level.

3. **Raised Eaves and Ridge:**

- The increased eaves and ridge height will not impact flood storage capacity or flow pathways.

B. Drainage Strategy

1. **Surface Water Management:**

- Install permeable paving, rainwater harvesting systems, and surface water attenuation measures to manage runoff, of any new external areas are created, currently no additional external area is proposed as it is all existing. The extensions and main bulk of the proposal is on and existing footprint.
- Ensure outflows are restricted to **greenfield runoff rates** or as specified by local drainage policies.

2. **Connection to Existing Drainage:**

- Ensure surface water is directed to existing drainage systems or sustainable drainage solutions (SuDS). There is minimal increase in additional surface water to the existing drainage system.

C. Flood Resilience and Emergency Measures

1. **Resilience Measures:**

- Electrical sockets, switches, and equipment will be raised at least **1m above floor level**.
- Non-return valves will be installed on drainage systems to prevent backflow.

2. **Flood Warning System:**

- The site will register with the Environment Agency's Flood Warning Service to ensure timely alerts for potential flooding events.

3. **Evacuation Plan:**

- Develop and communicate a flood evacuation plan, including safe egress routes and assembly points outside the flood risk area.
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5. Impact of Development on Flood Risk

A. Off-Site Impacts

- The proposed development will not increase flood risk off-site due to the incorporation of effective drainage systems and adherence to greenfield runoff rates.
- No reduction in flood storage capacity as the development does not encroach into functional floodplain areas.

B. Climate Change Consideration

- The design accounts for a **20–40% increase in peak rainfall and river flow** in line with Environment Agency climate change guidance.
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6. Compliance with Planning Policy

A. National Planning Policy Framework (NPPF)

- **Sequential Test:** The site is an existing developed industrial area, and the proposal represents appropriate use within Flood Zone 2.
- **Exception Test:** The development provides significant economic benefits, and flood risks are mitigated through design and existing wider and local site infrastructure and flood defence methods / strategies.

B. Local Planning Policy

- The development aligns with Rochdale Borough Council's flood risk policies, demonstrating sustainable drainage and risk mitigation measures.
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7. Conclusion

This Flood Risk Assessment demonstrates that the proposed development at GNG Foam Converters is appropriate for its location and does not significantly increase flood risk on-site or off-site. By incorporating mitigation measures, the development will remain safe and resilient under current and future flood conditions.

Drainage Assessment

Drainage Assessment for the Extension / Infill Extension of Part of GNG Foam Converters existing Warehouse, creating new two storey offices, including raising the eaves and ridge height, GNG Foam Converters (Lancs) Ltd, Todmorden Road, Littleborough, Lancashire, OL15 9EG.

1. Introduction

This Drainage Assessment supports the planning application for the proposed development at GNG Foam Converters. The proposal involves minimal changes to the existing drainage system due to a negligible increase in roof area and foul water discharge.

The assessment demonstrates compliance with local and national planning requirements, ensuring that the proposed development will not adversely affect the existing drainage infrastructure or increase the risk of flooding on-site or off-site.

2. Site Description

A. Existing Drainage

- **Foul Water:** Currently connected to the local foul drainage network. No known issues or capacity constraints exist.
- **Surface Water:** Discharged into the existing drainage system, with runoff directed towards existing soakaways, public sewer, road gullies and existing drainage network.

B. Proposed Changes

1. **Roof Area:**
 - Increase in roof area: **75m²**.
 - This increase is minor and is expected to have a negligible impact on surface water runoff.
 2. **Foul Water:**
 - New male and female toilet facilities will result in a small increase in foul water discharge, which is also considered negligible given the scale of the development.
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3. Drainage Strategy

A. Foul Water Management

- The existing foul water system will be utilised.
- The addition of two new toilets within the office area is unlikely to exceed the capacity of the current foul drainage system.
- Connections to the existing foul sewer will be made in accordance with **Building Regulations Part H**.

B. Surface Water Management

- The additional **75m² roof area** will marginally increase surface water runoff. However, this impact is mitigated by the following:
 - The raised roof does not contribute to new impermeable area.
 - Surface water will continue to discharge into the existing system, which has sufficient capacity.
 - There are no known issues with the capacity or operation of the existing drainage infrastructure.

C. Sustainable Drainage Systems (SuDS)

Given the minimal increase in runoff, SuDS measures are not considered necessary for this development. However, the following measures will be implemented to ensure sustainable drainage:

- **Rainwater Goods:** Gutters and downpipes will be designed to efficiently manage runoff from the new roof area.
 - **Maintenance of Existing Drainage:** The current system will be inspected and maintained to ensure optimal performance.
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4. Flood Risk Considerations

- The site is located in **Flood Zone 2**, with flood defences in place along the River Roch.
 - The negligible increase in impermeable area and continued use of the existing drainage systems ensure the development does not increase flood risk on-site or to adjacent properties.
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5. Conclusion

The proposed development at GNG Foam Converters will utilise existing foul and surface water drainage systems, with only a negligible increase in both foul discharge and roof runoff. The design ensures compliance with drainage policies and best practices without requiring significant modifications to existing infrastructure.