FLOOD RISK ASSESSMENT
FOR COMMERCIAL DEVELOPMENT AT
PUDDING LANE, PINCHBECK, SPALDING

FINAL REPORT

ECL1529-2a/OGLESBY & LIMB LTD

DATE JANUARY 2026

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1.0 INTRODUCTION

This Flood Risk Assessment has been prepared in accordance with National Planning Policy Framework (NPPF) and supporting planning practice guidance (PPG) on Flood Risk and Coastal Change.

In areas at risk of flooding or for sites of 1 hectare or more, developers are required to undertake a site-specific Flood Risk Assessment to accompany an application for planning permission. This Flood Risk Assessment has been produced on behalf of J O Sims Ltd in respect of a development that consists of an extension to an existing factory at Pudding Lane, Pinchbeck, Spalding.

A planning application for the proposed development is to be submitted by Oglesby & Lim Limited.

2.0 SITE LOCATION AND DESCRIPTION

2.1 Site Location

The site is located at J O Sims Ltd, Pudding Lane, Pinchbeck, Spalding, PE11 3TJ. The National Grid Reference of the site is 52513/32487.

The location of the site is shown in Figure 1.



Figure 1 – Location Plan (© OpenStreetMap contributors)

2.2 Existing Site

The development site is within a factory site on the southern side of Wardentree Lane. The site comprises an area of land on the south eastern side of the existing factory building. The area of development is approximately 0.15 hectares.

Environment Agency LiDAR shows that the site is flat with ground levels typically between +3.3m OD and +3.4m OD. The factory site has ground levels between +3.1m OD and +3.4m OD.

The site is in the Welland and Deepings Internal Drainage Board (IDB) District. Surface water at the site would discharge to the local drainage network and hence to the IDB drain system. There are riparian drains close to the boundary of the site and Scraggs Dyke, an IDB watercourse, is on the northern side of Wardentree Lane.

The online British Geological Survey maps indicate that the site is likely to be underlain by Oxford Clay Formation mudstone. The bedrock is shown to be overlain with superficial deposits of clay and silt.

2.3 Proposed Development

The proposed development consists of an extension to the existing factory, together with an area of hardstanding yard. The extension will comprise 2 connected sheds. Details of the proposed development are provided in Attachment 1.

2.4 Local Development Documents

The South East Lincolnshire Local Plan 2011 – 2036, adopted in March 2019, is the Local Plan for the district. Policy 4: Approach to Flood Risk states the requirements for flood risk reduction.

The South East Lincolnshire Level 1 and Level 2 Strategic Flood Risk Assessment (SFRA) was prepared in June 2017.

The Joint Lincolnshire Flood Risk and Drainage Management Strategy has been prepared by Lincolnshire County Council as the Lead Local Flood Authority. The purpose of the Strategy is to increase the safety of people across Lincolnshire by reducing the number of people at risk of flooding, increasing the resilience of local communities, and reducing the impact of flooding

2.5 Available Flood Risk Information

An extract from the Environment Agency Flood Map for Planning is shown in Figure 2. The site is located within Flood Zone 3, an area with a high probability of flooding.

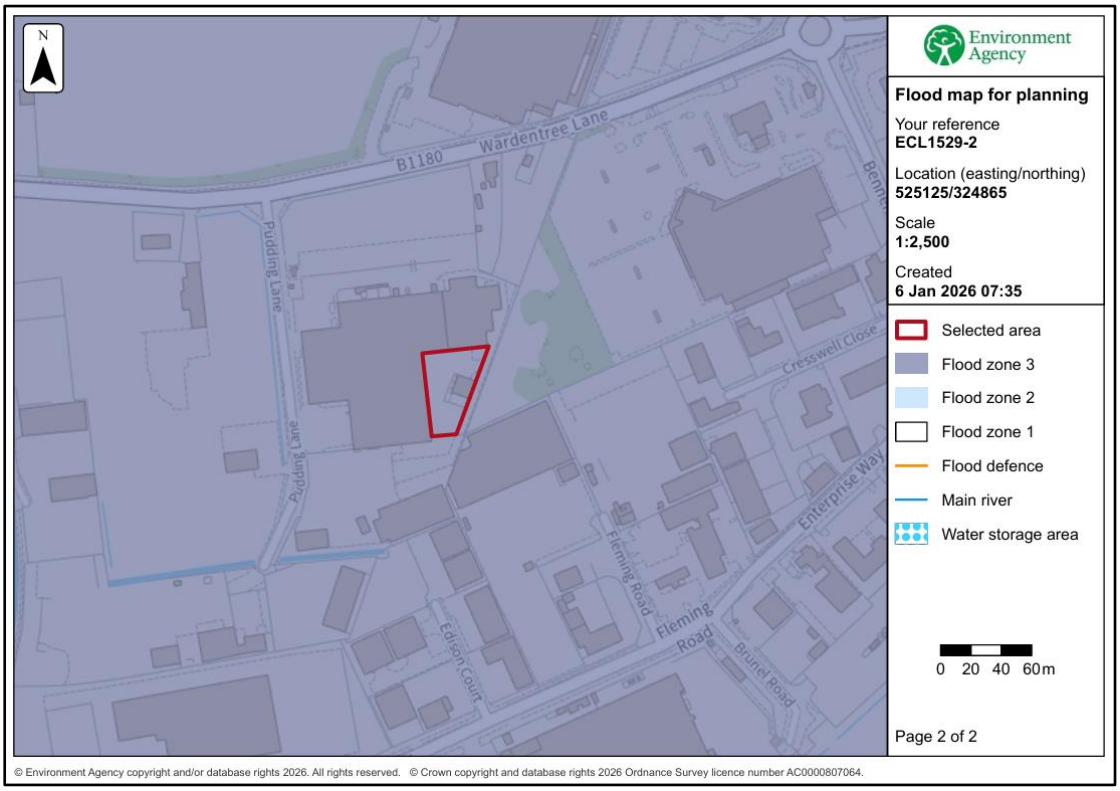


Figure 2 – Environment Agency Flood Map for Planning

The Environment Agency Long Term Flood Risk maps provide an indication of the risk from the primary sources of flooding. The details provided with these maps are summarised in Table 1. The depth of flooding identified is the maximum depth that occurs during a low chance (between 0.1% and 1% chance each year) event.

	Present Day		2050 Epoch	
	Risk of Flooding	**Depth (Low chance)**	**Risk of Flooding**	**Depth (Low chance)**
Rivers and the Sea	The site has a low chance (between 0.1% and 1% chance each year)	No data available	No data available	No data available
Surface Water	The site is outside the area with a low risk (between 0.1% and 1% chance each year)	Not at risk	An isolated area of the site has a low chance (between 0.1% and 1% chance each year)	During low chance events depths are below 0.2m
Reservoir	Outside of the area at risk.			

Table 1 – Environment Agency Long Term Flood Risk Maps

Table 2 shows the level of risk at the site within the South East Lincolnshire SFRA.

SFRA Map	Present Day	2116
Residual Flood Hazard Map for the 1% fluvial and 0.5% tidal event	The site is outside the 'Low Hazard' area	The site is in the 'Low Hazard' area
Residual Peak Depth Map for the 1% fluvial and 0.5% tidal	The site is outside the area at risk	The peak flood depth is 0.0m-0.25m

Table 2 – Flood Risk within SFRA Maps

3.0 FLOOD RISK VULNERABILITY

3.1 The Sequential and Exception Test

The NPPF requires the application of a Sequential Test to ensure that new development is in areas with the lowest probability of flooding.

The Exception Test is a method to demonstrate and help ensure that flood risk to people and property will be managed, while allowing necessary development to go ahead in situations where suitable sites at lower risk of flooding are not available.

3.2 Vulnerability Classification

Table 2 of the PPG Flood Risk and Coastal Change categorises different types of uses and development according to their vulnerability to flood risk. The proposed development is covered by the description of general industry and is classified as 'Less Vulnerable'.

Table 3 of the PPG Flood Risk and Coastal Change sets out Flood Risk Vulnerability and flood zone 'compatibility'. The site is in Flood Zone 3 and the development is 'Less Vulnerable' therefore it is not necessary to complete the Exception Test.

PPG Flood Risk and Coastal Change defines that the lifetime of the development in terms of flood risk and coastal change is 100 years.

3.3 Application of the Sequential Test

It is for the Local Planning Authority, using the evidence provided and taking advice from the Environment Agency as appropriate, to consider whether an application passes the Sequential Test.

The proposed development will form part of the business based at the site. It would not be practicable to undertake the development at an alternative location. The proposal is considered to pass the Sequential Test.

4.0 SITE SPECIFIC FLOOD RISK

4.1 Local Flood Assets

The site is approximately 1000m west of the River Welland downstream of Spalding. The River Welland tidal defences, which are downstream of the confluence of the Coronation Channel and River Welland, provide protection to Pinchbeck. The tidal defences are the responsibility of the Environment Agency.

There is a long-term strategy for the maintenance of the Environment Agency defences which is reviewed and updated periodically.

There is an extensive local drainage network managed by Welland and Deepings IDB. There is an IDB maintained watercourses, the Pennygate Pup Drain, 200m to the west of the site. The site and the surrounding land are within the Pinchbeck catchment and drain in a north westerly direction to Pinchbeck Marsh Pumping Station. Pinchbeck Marsh Pumping Station discharges to Vernatts Drain which flows into the River Welland at Surfleet.

During the operation and maintenance of its pumping stations, associated structures and channel systems, the IDB seeks to maintain a general standard capable of providing flood protection to its district. A routine maintenance programme is in place to ensure that the Boards assets are commensurate with the standard of protection that is sought.

Current maintenance standards of the Welland and Deepings IDB and the Environment Agency are generally good.

4.2 Sources of Flooding

A summary of the sources of flooding is provided in Table 3.

Source of Flooding	Level of Risk
Drainage Network Flooding	The risk is assessed in Section 4.3.
Surface Water Flooding	Based upon the EA maps the risk is low / very low.
Fluvial Flooding	The risk is assessed in Section 4.3.
Tidal Flooding	The risk is assessed in Section 4.3.
Reservoir Flooding	Based upon the EA maps the site is not at risk of reservoir flooding.
Groundwater Flooding	There is no evidence to suggest the site is at risk of groundwater flooding.

Table 3 – Sources of Flooding

4.3 Probability of Flooding

The probability of flooding associated with blockages in the Welland and Deepings IDB drainage system is low due to the maintenance standards achieved and managed by the IDB. Failure of Pinchbeck Marsh Pumping Station could lead to an increased level of flood risk in the IDB catchment.

Through the operation and maintenance of the pumping stations and the channel system the Board seek to maintain a general standard capable to providing flood protection to agricultural land and developed areas of 1 in 20 years and 1 in 100 years, respectively. The risk associated with flood events that exceed the standard of protection provided is lowered due to the Welland & Deeping IDB main drains incorporating freeboard. This freeboard provides storage during the exceedance events.

The River Welland tidal defences provide protection during the 0.5% annual probability (1 in 200 chance each year) tidal event including climate change.

4.4 Historic Flooding

During the preparation of this assessment, no evidence was discovered of the site being flooded.

4.5 Climate Change

Climate change is likely to impact the site through increased rainfall intensity and duration affecting the local drainage network and increased flood levels.

The River Welland tidal defences have been designed to include an allowance for climate change.

In summary the existing systems and defences are appropriate for the design life of the development (i.e., 100 years).

4.6 Residual Risk

There is a residual risk of flooding at the site should a breach occur in the defences. The South East Lincolnshire SFRA includes maps demonstrating the impact of a breach in 2116. The Residual Peak Depth maps within the SFRA indicate the maximum flood depths associated with a breach and overtopping of defences. These show a peak flood depth is between 0.0m and 0.25m.

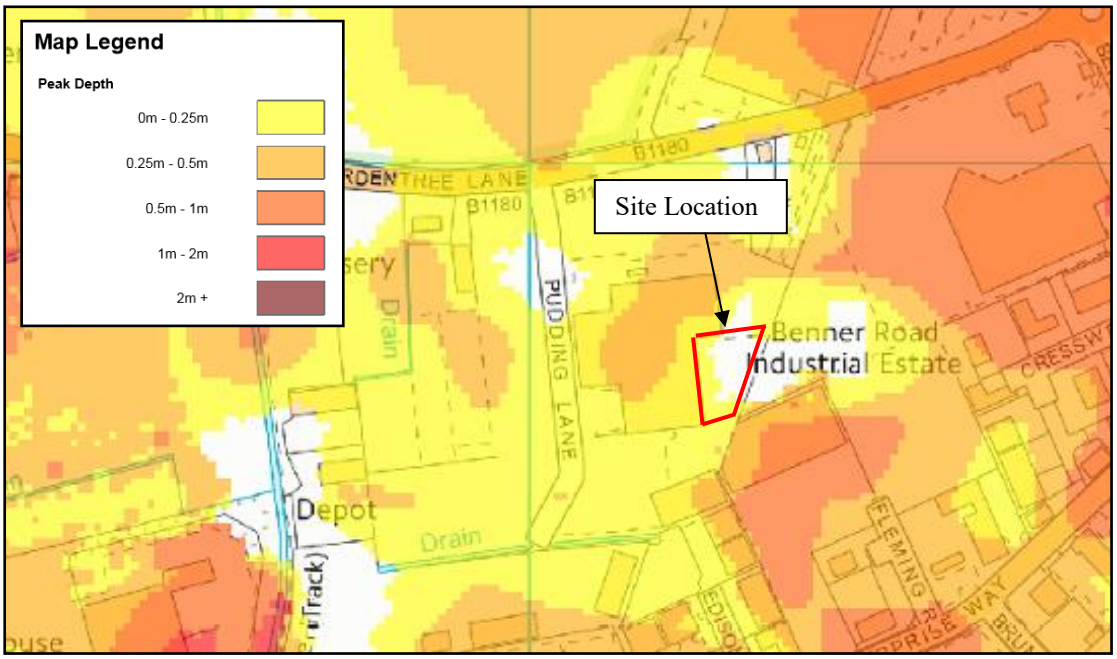


Figure 3 – SFRA 2116 Residual Peak Depth Map during the 1% fluvial and 0.5% tidal Annual Probability Event

5.0 FLOOD RISK MITIGATION

5.1 Summary of Risks

The probability of this development flooding from localised drainage systems is low. Failure of Pinchbeck Marsh Pumping Station could lead to an increased level of risk within the IDB catchment.

The probability of the site flooding from any Environment Agency system is less than 0.5% annual probability (1 in 200 chance each year) because of the standards of the existing flood defence systems. Over time there will be a gradual increase in risk to the site due to climate change. During the design life of the development it is not anticipated that the site would flood.

The SFRA considers the residual risk associated with overtopping and a breach in the defences in 2116. During the 0.5% annual probability (1 in 200 chance each year) plus climate change event the maximum flood depth at the site is 0.25m.

The proposed development increases the impermeable area and therefore has the potential to increase the rate of surface water runoff from the site.

5.2 Flood Risk Mitigation Measures

The PPG states that resistance and resilience measures may be suitable in some circumstances. One example given when it is suitable is as a measure to manage residual flood risk. The mitigation measures required are to manage the residual risk from a breach in the defences therefore flood resilience is appropriate.

Considering the nature and scale of the risk it is recommended that:

- the users of the site should register to receive flood warnings from the Environment Agency to reduce the vulnerability of people at the site;
- the users of the site should identify the actions to be undertaken in the event of receiving a flood warning;
- the electrical supply and switchboard are above the flood level; and
- there is a water extension.

Should there be a failure of Pinchbeck Marsh Pumping Station and conditions were such to put properties and land at risk of flooding, the IDB would take emergency action to maintain the drainage level of service by using temporary pumping equipment.

It is recommended that surface water run-off is managed so that stormwater from the development will not affect any adjoining properties or increase the flood risk elsewhere.

6.0 CONCLUSIONS

As a result of the assessment, the following conclusions have been reached.

- The proposed development consists of an extension to an existing factory at Pudding Lane, Pinchbeck, Spalding.

- The site is located within an Internal Drainage Board catchment and through the operation and maintenance of the pumping stations and the channel system the Board seek to maintain a general standard capable to providing flood protection to agricultural land and developed areas of 1 in 20 and 1 in 100 years, respectively.

- The proposed development is in Flood Zone 3. The proposed development benefits from tidal defences on the River Welland that provide protection the 1% annual probability (1 in 100 chance each year) fluvial event and 0.5% annual probability (1 in 200 chance each year) tidal event including climate change.

- There is a residual risk associated with a breach of the defences with flood depths at the site up to 0.25m.

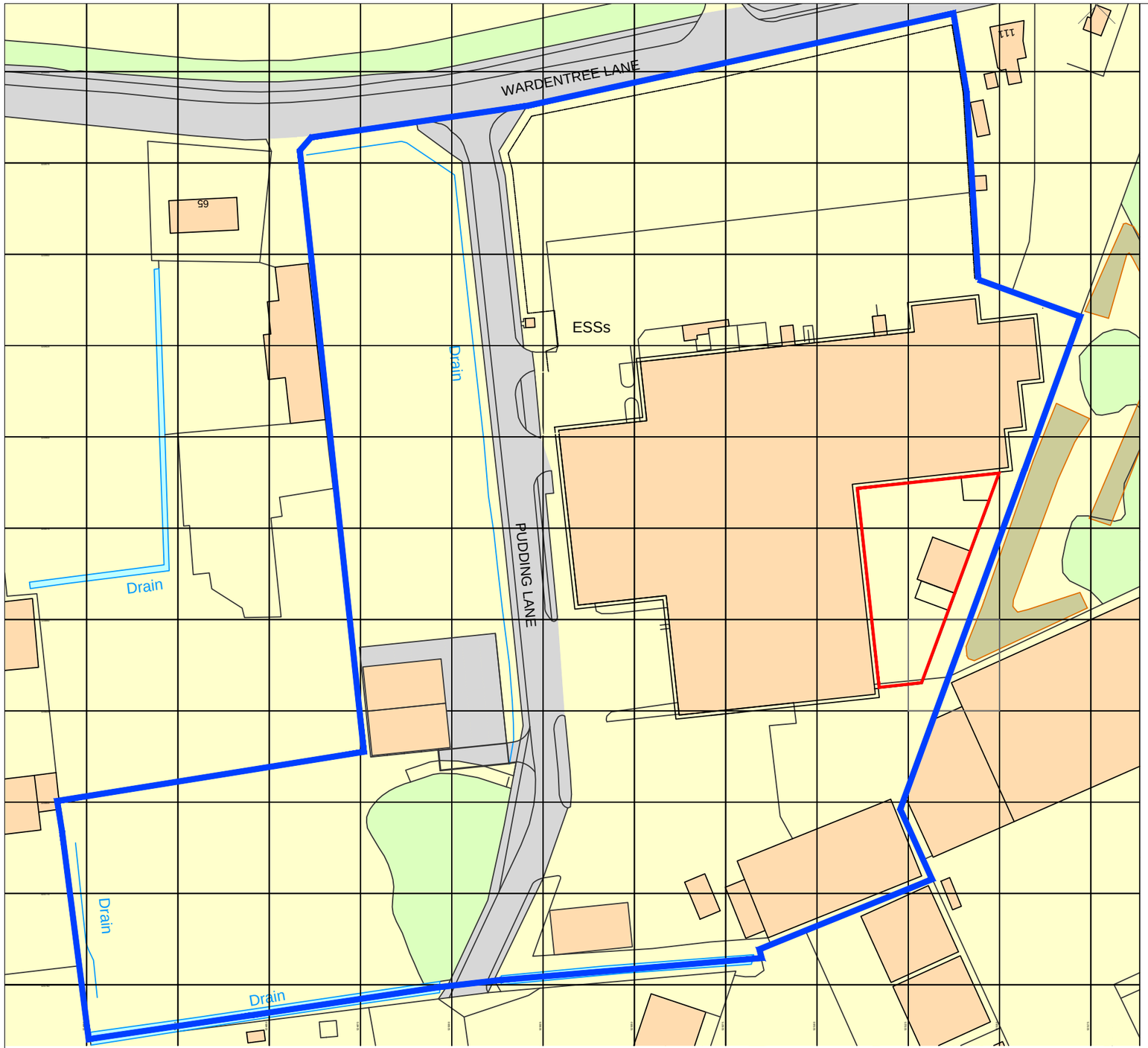
- It is recommended that flood resilience measures are adopted to manage the risk of a breach including the use of flood warnings, a water entry strategy, and elevated electrical services.

- The development passes the Sequential Test and is therefore suitable for the proposed location.

ATTACHMENT 1

LOCATION PLAN
(DWG A1803-01 P1)

PROPOSED EXTENSION
(DWG A1803-10 P1)



Site Location Plan

SCALE 1 : 1250

SCALE 1 : 1250
SCALE 1 : 1

0m 10m 20m 40m 60m 80m 100m

0m 10mm 20mm 40mm 60mm 80mm 100mm

Ordnance Survey, (c) Crown Copyright 2025. All rights reserved. Licence number 100022432

Extent of works area

Extent of applicant's premises

P1	21.01.2026	Status amended to Planning Application Issue	CLS

Client:

J.O. Sims Ltd

Project: **Proposed Extension adjacent Store 6 Pudding Lane, Pinchbeck, Spalding, Lincolnshire, PE11 3TJ**

Date: Nov 2025

Scale: as shown

Drawn by: AJO

Checked by: AP

Drawing No.: A1803-01

Rev: P1

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Drawing Title:

Location Plan As Existing

PLANNING APPLICATION ISSUE

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Chartered Architect

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O&L

Doc Ref:	A1DwgSheet	Doc Name:	A1 Size Drawing Sheet	Reviewed:	xx.xx.xx
Version:	1	Doc Author:	Carl Silvester	Next Review:	xx.xx.xx

Ground Floor Plan

Scale 1:200 @ A1

SCALE 1 : 200
SCALE 1 : 1

0m 5m 10m 15m 20m

0m 10mm 20mm 40mm 60mm 80mm 100mm

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Ex GF Total = 8,333m2

GIA Total = 814m2

Packhouse - Dates
F-C = 2875

Office 3
F-C = 3031

Office 2
F-C = 3031

QA Office
F-C = 2867

F-C = 2879

Office 1
F-C = 3031
MW core ceiling panel.

Packhouse - Fresh
F-C = 4250

Engineering
F-C = Varies

Shelf life store
F-C = Varies

QC store
F-C = Varies

Wash Room
F-C = Varies

Film Store
F-C = Varies

Cold Store 4
F-C = varies

Plant Rooms

F-C = 2270

Cold Store 7
F-C = varies

Demand Alley
F-C = varies

Demand Alley
F-C = 4254

Dried fruit / Mixing room
F-C = varies

Packhouse 1
F-C = 4100

Cloakroom
F-C = 4100

Cold Store 2

Cold Store 3
(Blast chill)
F-C = varies

Packhouse - Nuts
F-C = varies

F-C = 3056

F-C = 5074

F-C = 5074

F-C = 3031

Cold Store - Nuts
F-C = varies

Loading Bay - Nuts 2

FL Charging
F-C = 4900

Cold Store 1
F-C = varies

Cold Store 6
F-C = 8210

Packhouse / Storage A

Packhouse / Storage B

existing FE blocked up

Personnel Door h - 2.03m

Roller door h - 3.59m

Roller door h - 3.32m

Loading Bay - Nuts 2
F-C = varies

Warehouse Office
F-C = 2310

Up - Over Door h - 2.89m

Personnel Door h - 2.03m

Personnel Door h - 2.02m

Up - Over Door h - 2.85m

Roller door h - 3.59m

Roller door h - 3.57m

Up - Over Door h - 2.55m

Loading Bays
F-C = varies

Cold Store 5
F-C = varies

Cold Store 6
F-C = 8210

Up - Over Door h - 2.85m

Up - Over Door h - 2.60m

Up - Over Door h - 2.83m

rapid roll door

roller shutter 3000

34583

6050

6023

13966

1200

3887

12085

Extent of proposed extension - 25.7m

Distance to Boundary - 6388

Distance to Boundary - 6307

34.6m - Extents of Proposed Extension

Line of structure set away from existing wall to enable substructure and structural frame to be constructed + allowance for gutters.

Fire Escape doors denoted 'FE'

Dashed line shows extents of Steam Room building demolished. Steam Room GIA = 125.6m2

Remaining grass area to be stripped and removed and replaced with a new reinforced concrete hardstanding for deliveries etc. (623m2)

Rev.	Date	Description	Initial
P1	21.01.2026	Status amended to Planning Application Issue	CLS

Oglesby & Limb Ltd
Chartered Architect and Technologist
Suite 1 Market Chambers
12 Market Place, Spalding, Lincs
PE11 1SL
Tel: 01775 761196
e-mail: design@o-l-ltd.co.uk

Client:
J.O.Sims Ltd.

Project:
Extension Adjacent Store 6
J.O.Sims Ltd
Pudding Lane, Pinchbeck
Spalding, Lincolnshire
PE11 3TJ

Drawing Title:
Proposed Extension -
Ground Floor Plan As Proposed

PLANNING APPLICATION ISSUE

Date:	Scale:
Nov 25	as shown @ A1
Drawn by: CLS	Checked by: AJO

Drawing Number:	Rev:
A1803 - 10	P1