

PROJECT TITLE: Upton Steel, Stanton Lane Phase 1 (18953)

PLANNING REFERENCE: 23/00876/DISCON

DATE: November 2023

Prepared by: NR

Checked by: MDF

Rev: B

DRAINAGE TECHNICAL NOTE - UPTON STEEL, STANTON LANE PHASE 1

Introduction

This Drainage Technical Note has been prepared by Woods Hardwick Ltd on behalf of CJ Upton & Sons Ltd in relation to their commercial development site known as 'Upton Steel Phase 1', (Planning Ref: 23/00876/DISCON).

LLFA Condition 5:

- 1. Full modelled scenarios for event durations up to the 24 hour (or longer where required) for the 1 in 1 year, 1 in 30 year and 1 in 100 year plus climate change return periods with results ideally showing critical details only for each return period. The model should also account for additional flows/areas (using supported robust assumptions where necessary) from Phase 2 of the development. Surcharging in the 1 in 1 year event should be minimised as much as reasonably practicable.*
- 2. Update Phase 1 updated engineering layout to incorporating the full surface water system including all storage feature and piped network, as opposed to being on two separate engineering drawings.*

Designers' Response:

1. Full modelled scenarios for storm events up to 1 in 100 year plus climate change for a duration of 24 hours provided. Only critical events shown for all return periods. See below for pages which include each storm event.
 - a. Page 7 - 1 in 1 year storm event
 - b. Page 8 - 1 in 30 years storm event
 - c. Page 9 - 1 in 100 year storm event
 - d. Page 10 - 1 in 100 year + 40% CC storm event

Additional flows have been accounted for as part of the strategy. Surface water catchment area of 8370m² has been allocated to manhole S8, (as shown bordered in red on Page 1 of the calculations) account for the surface water flows from future Phase 2. Storage and flow control (as shown bordered in red on Page 5 of the calculations) has also been allocated to this node for Phase 2.

Surcharge occurs in the 1 in 1 year event due to the flow control restriction at manhole S16. Surcharge for the 1 in 1 year has been reduced as much as reasonable practical to help utilise the storage provided. Surcharge is acceptable as the proposed system is to remain private.

See attached "18953 Storm Calculations 20.11.2023" for most up to date calculations.

2. A new Levels and Drainage Strategy drawing has been produced for planning purposes to demonstrate the proposed strategy upon completion of Phase 1 including all storage features and pipework. This is reflected by the calculations. Please see drawing "18953-UPST-5-SK008 Levels and Drainage Strategy".