

MEMO

Project name **Station Hill Phase 1**
 Project no. **1620004716**
 Client **Lincoln MGT**
 To **Reading Borough Council**
 From **Keith Jones**

Storm Water Drainage Supplementary Memo

This memo outlines the minor modifications proposed to the storm water drainage network, the compliance with the approved drainage strategy and the status of the installed drainage prior to occupation of the first units in Block E.

Date 27/07/2023

The approved Station Hill Phase 1 Drainage Strategy and SUDS Requirement is set out in Ramboll report SHR-RAM-XX-RP-C-000002 dated April 2020. The requirement for attenuation tanks in the storm water network is set out in Section 2.12 and replicated below.

It has been calculated that the proposed combined attenuation system will require circa 317m³ of attenuation storage volume design to contain a 1 in 100-year 24hr storm event (including 40% allowance for climate change) without causing any flooding on site. The attenuation volume is based on the proposed hardstanding areas being drained at a restricted discharge rate (as agreed in the Hoare Lea Storm Water Drainage Strategy dated 13 July 2015). The required storm water attenuation storage will be provided by means of a podium-level attenuation system together with the appropriate drainage collection pipework and chambers. The following attenuation medium and volumes have been identified;

- Below ground attenuation tanks (3no. tanks proposed)
- Above-ground Podium attenuation tanks/reservoirs (3no proposed)

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Phase 1 Development Site	Attenuation Storage Type	Attenuation Storage Volume (m ³)
Block E (North), including external area (Tank A)	Below ground/slab level Storage (cellular units, or similar)	68
Block E (South), including part of Friars Walk and external area (Tank B)	Below ground/slab level Storage (cellular units, or similar)	94
Block F, including part of Friars Walk and part of external area (Tank C)	Below ground/slab level Storage (cellular units, or similar)	65
		Total = 227

Phase 1 Development Site	Attenuation Storage Type	Attenuation Storage Volume (m ³)
Block E (North), including external area (Tank D)	Podium level Storage (cellular units, or similar)	48
Block E (South), including part of Friars Walk and external area (Tank E)	Podium level Storage (cellular units, or similar)	13
Block F, including part of Friars Walk and part of external area (Tank F)	Podium level Storage (cellular units, or similar)	29
		Total = 90

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The final construction issue version of the storm water drainage drawings included the 6 tanks described above with the attenuation volumes identical for tanks A to D and slightly larger for tanks E to F.

Tank	Attenuation Volume (m ³)
A	68
B	94
C	65
D	48
E	26
F	32

The are shown on the attached drawings at the end of this memo. The Contractor Midgard has installed these 6 tanks and a confirmation email is provided.

In addition to the 6 tanks, additional shallow attenuation (permavoid or similar) under the pavement areas of Garrard Street was shown on the drawings included in the Drainage Strategy report. However, these areas were not included in the hydraulic model as attenuation and were primarily provided as a method of collecting the water if permeable paving was adopted.

The subsequent design development of Garrard Street has resulted in the pavement being drained via slot drains and gulley points. The volume of the Garrard Street shallow attenuation has been replaced with 3 attenuation tanks of similar volume. Thus there is no fundamental change to the storm water drainage network as set out in the approved drainage strategy report.

Keith Jones

From: Brendan McGuigan <brendan.mcguigan@jrlgroup.co.uk>
Sent: 27 July 2023 13:54
To: Keith Jones; Elliot Tarling
Subject: Attenuation Tanks Install Confirmation

Hi Keith,

Please take this email as confirmation that attenuation tanks A through to F have been installed during the ground works phase of the project.

Brendan McGuigan

Project Director

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JRL Group

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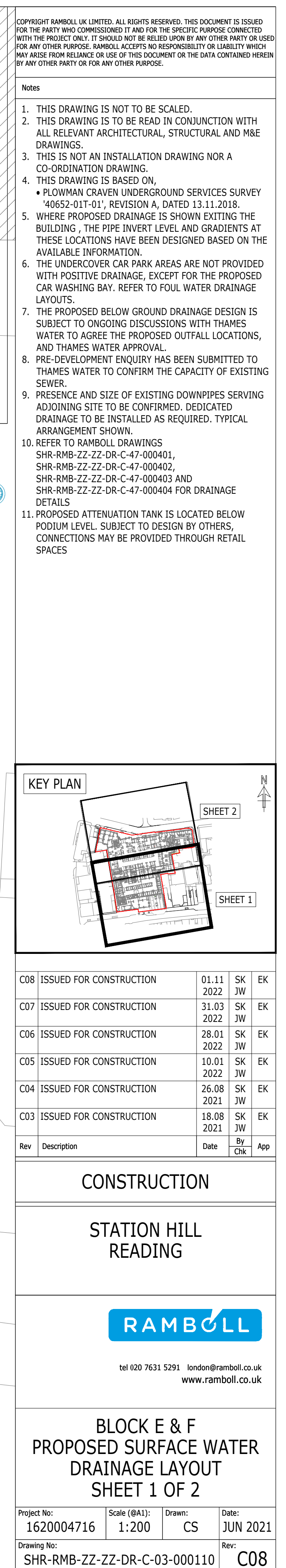
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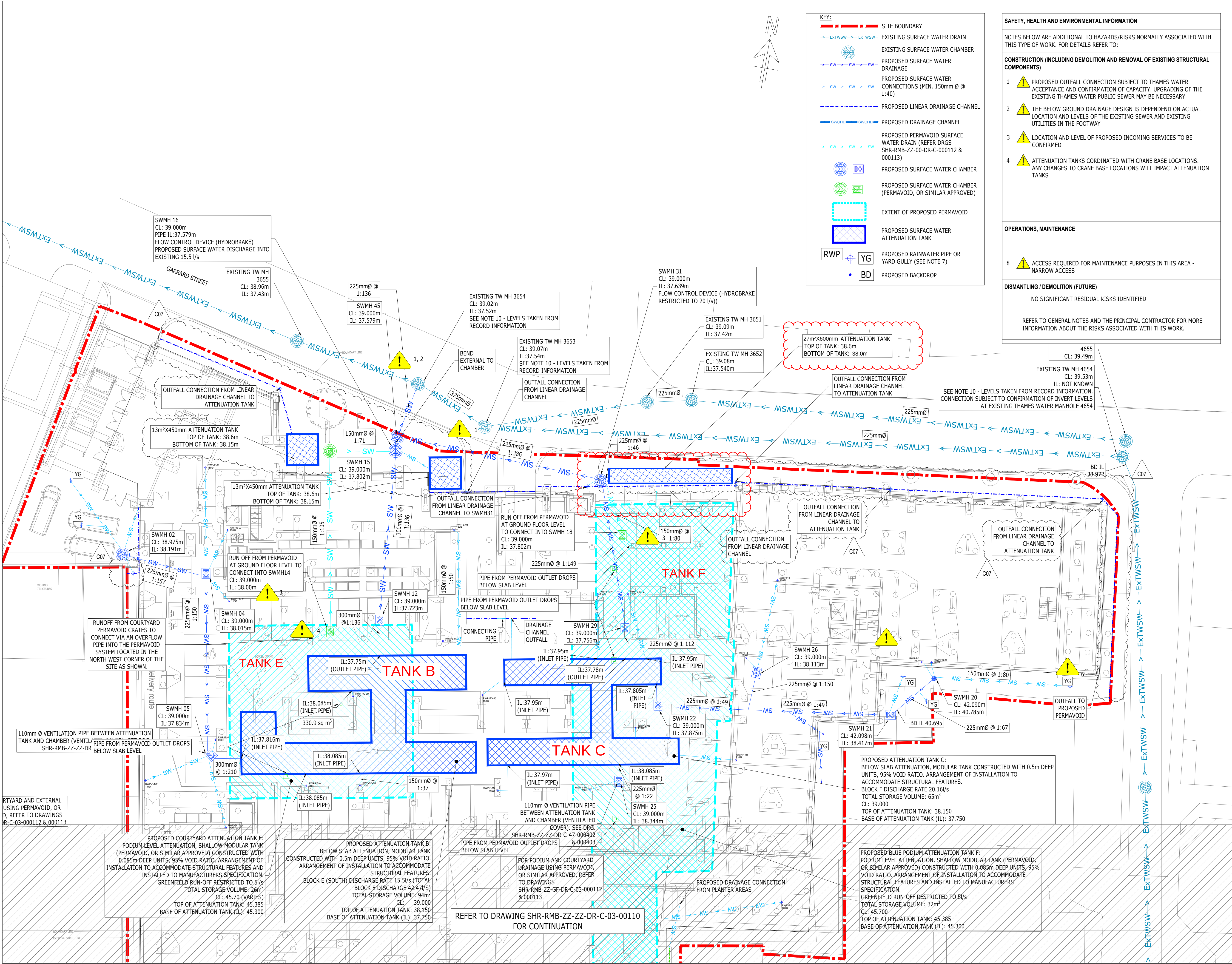
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Notes

- THIS DRAWING IS NOT TO BE SCALED.
- THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECTURAL, STRUCTURAL AND M&E DRAWINGS.
- THIS IS NOT AN INSTALLATION DRAWING NOR A CO-ORDINATION DRAWING.
- THIS DRAWING IS BASED ON:
 - PLOWMAN CRAVEN UNDERGROUND SERVICES SURVEY '40652-DIT-01', REVISION A, DATED 13.11.2018.
- WHERE PROPOSED DRAINAGE IS SHOWN EXITING THE BUILDING, THE PIPE INVERT LEVEL AND GRADIENTS AT THESE LOCATIONS HAVE BEEN DESIGNED BASED ON THE AVAILABLE INFORMATION.
- THE UNDERCOVER CAR PARK AREAS ARE NOT PROVIDED WITH POSITIVE DRAINAGE, EXCEPT FOR THE PROPOSED CAR WASHING BAY. REFER TO FOUL WATER DRAINAGE LAYOUTS.
- THE PROPOSED BELOW GROUND DRAINAGE DESIGN IS SUBJECT TO ONGOING DISCUSSIONS WITH THAMES WATER TO AGREE THE PROPOSED OUTFALL LOCATIONS, AND THAMES WATER APPROVAL.
- PRE-DEVELOPMENT ENQUIRY HAS BEEN SUBMITTED TO THAMES WATER TO CONFIRM THE CAPACITY OF EXISTING SEWER.
- PRESENCE AND SIZE OF EXISTING DOWNPIPES SERVING ADJOINING SITE TO BE CONFIRMED. DEDICATED DRAINAGE TO BE INSTALLED AS REQUIRED. TYPICAL ARRANGEMENT SHOWN.
- REFER TO RAMBOLL DRAWINGS:
 - SHR-RMB-ZZ-ZZ-DR-C-47-000401,
 - SHR-RMB-ZZ-ZZ-DR-C-47-000402,
 - SHR-RMB-ZZ-ZZ-DR-C-47-000403 AND
 - SHR-RMB-ZZ-ZZ-DR-C-47-000404 FOR DRAINAGE DETAILS
- PROPOSED ATTENUATION TANK IS LOCATED BELOW PODIUM LEVEL. SUBJECT TO DESIGN BY OTHERS, CONNECTIONS MAY BE PROVIDED THROUGH RETAIL SPACES
- REFER TO RAMBOLL S278 DRAWING FOR EXTERNAL DRAINAGE NETWORK.
 - SHR-RMB-X0-EX-DR-C-03-100101, 100102 AND 100103

KEY PLAN

SHEET 2

SHEET 1

Rev	Description	Date	By	App
C07	ISSUED FOR CONSTRUCTION	01.11.2022	SK	EK
C06	ISSUED FOR CONSTRUCTION	28.01.2022	SK	EK
C05	ISSUED FOR CONSTRUCTION	10.01.2022	SK	EK
C04	ISSUED FOR CONSTRUCTION	26.08.2021	SK	EK
C03	ISSUED FOR CONSTRUCTION	16.08.2021	SK	EK
C02	ISSUED FOR CONSTRUCTION	15.07.2021	SK	EK

CONSTRUCTION

STATION HILL READING

RAMBOLL

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**BLOCK E & F
PROPOSED SURFACE WATER
DRAINAGE LAYOUT
SHEET 2 OF 2**

Project No:	Scale (@A1):	Drawn:	Date:
1620004716	1:200	CS	DEC 2018

Drawing No:	Rev:
SHR-RMB-ZZ-ZZ-DR-C-03-000111	C07