

Our Ref: 20/010/GM/23/006

Your Ref: 20220733

Planning and Regeneration
Gravesham Borough Council
Civic Centre
Gravesend
Kent
DA12 1AU

For the attention of Mr E Bonthron



27 February 2023

6 Forbes Business Centre
Kempson Way
Bury St Edmunds
Suffolk
IP32 7AR

t: 01284 764 085

w: pdeconsulting.co.uk

Dear Ethan,

Planning Application Reference 20220733 – Land at Imperial Wharf, Clifton Marine Parade, Gravesend, Kent, DA11 0DY

Further to previous correspondence I am writing to address the matters raised by the Environment Agency (EA) in their letter dated 27 January 2023 in respect of the above. I note that the EA are maintaining their objection to the Proposed Development on the basis of the standoff distance between the proposals and the Thames flood defences.

We have reviewed the layout of the Proposed Development and have amended the Site layout as illustrated on the attached Drawing Reference KD.IMP.D.004A. The changes to the Site layout include altering the position of the truck loading gantry, emulsion plant and emulsion plant tanks. The revised standoffs are now as follows:

	Original Layout (m)	Revised Layout (m)
Loading Gantry	6.7	19.8
Emulsion Plant	5.7	12
Emulsion Plant Tanks	15	19.6

The revised layout is the most practical option for the Applicant given the constraints of the Site and ensures that the truck loading gantry and emulsion plant tanks are constructed as far away from the Thames flood defence as reasonably possible.

Whilst the emulsion plant remains within 16m of the flood defence it has been relocated further south from the originally proposed location, increasing the offset by an additional 6.3m. It is worth reiterating, however, that the emulsion plant essentially comprises of equipment housed inside a container. It does not require permanent fixed foundations and can therefore be easily removed and relocated in future if necessary.

With regard to the other aspects of the EA's letter, please find attached a revised copy of Drawing Reference 317181, revision PO2, prepared by Frankham Consultancy Group which confirms the proposed concrete upstand on the flood defences would raise the crest height to 7.09maOD. This exceeds the height required



to achieve the 2040 defence level. Please note that the section of the wall which is identified as not needing to be raised currently has a crest level in the order of 9.28maOD.

With respect to the interaction between the bitumen line and the existing tidal flood defence I have included the photographs below to illustrate how the line currently crosses the flood wall.





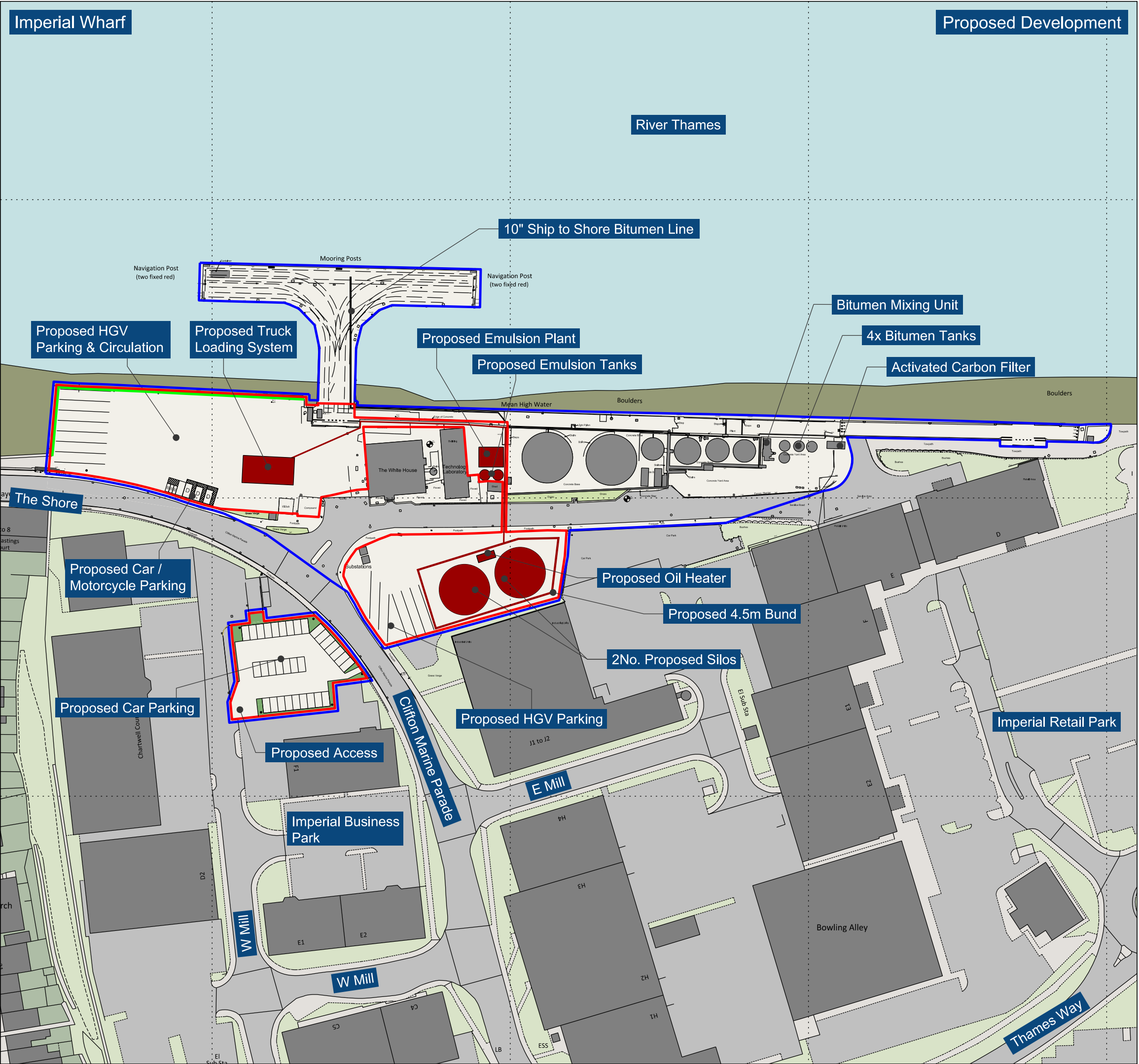
As you can see the bitumen line runs along the wharf edge before crossing over the flood defence wall where the wall is already raised to a height of 9.28maOD. This is 2.28m higher than the 2040 flood defence level of 7.00 maOD. The lower section of the wall seen in the foreground of the above images will be subject to raising as per the proposals illustrated on Drawing Reference 317181, revision PO2. There will be no conflict between the bitumen line and the ability to undertake this work.

I trust that the above addresses the matters raised by the EA and is sufficient to demonstrate that there will be no conflict between the Proposed Development and the Thames flood defences nor the ability to undertake future raising works. Should you have any questions, please do not hesitate to contact me.

Yours sincerely,

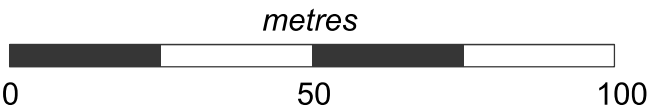
Gr. Massingham

George Massingham BSc (Hons) AssocRTPI
CONSULTANT



Legend

- Planning Application Boundary
- Land Under the Control of the Applicant
- Existing Buildings & Infrastructure within and surrounding the Site
- Proposed Additional Plant, Tanks & Infrastructure
- Proposed Landscaping to Car Parking Area
- Vehicle Crash Barrier



consulting
limited
chartered surveyors

PROJECT
Imperial Wharf

DRAWING TITLE
Proposed Development

DATE
February 2023

SCALE
1:1,250 @ A3

DRAWING No.
KD.IMP.D.004A

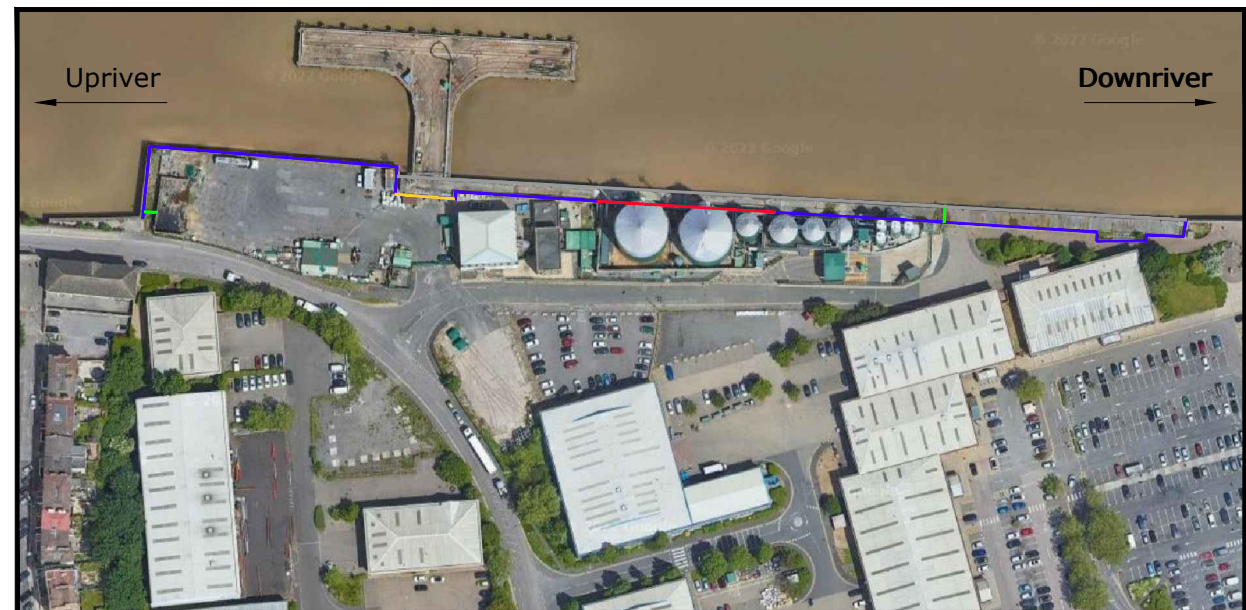
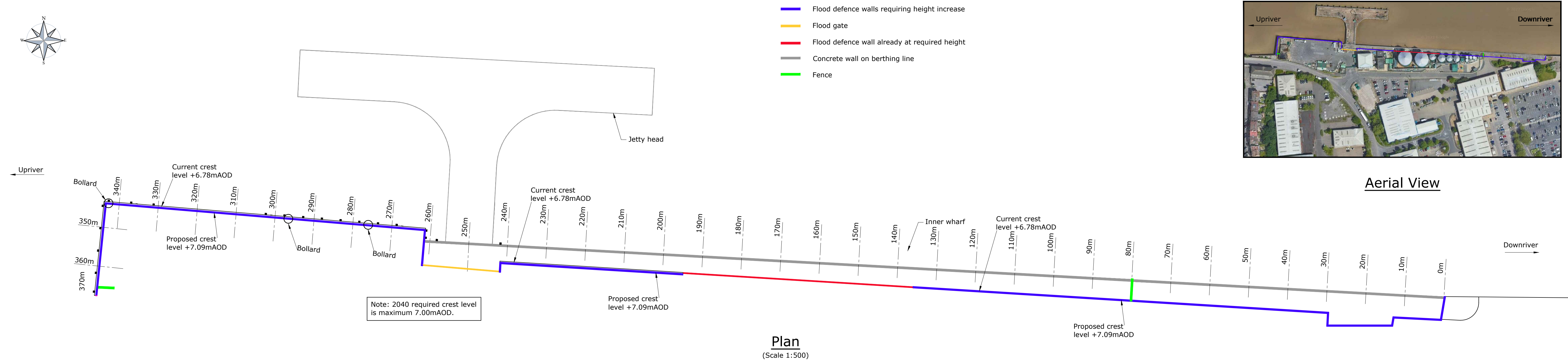
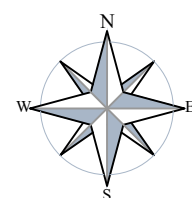
DRAWING STATUS
FINAL



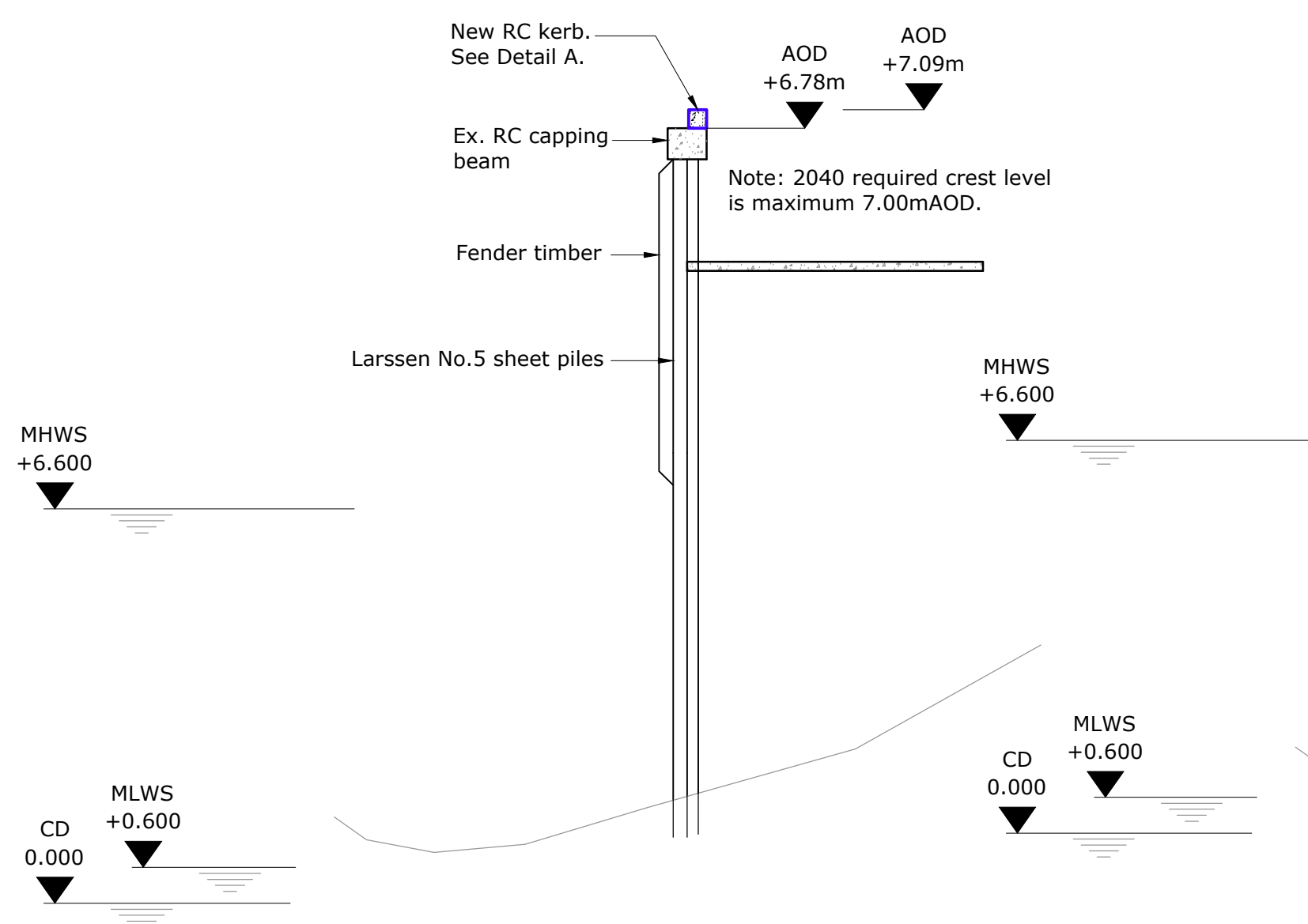
Reproduced from Ordnance Survey digital map data © Crown Copyright. All rights reserved. License number 0100031673

THIS DRAWING MAY NOT BE USED WITHOUT CONSENT OF PDE CONSULTING LTD

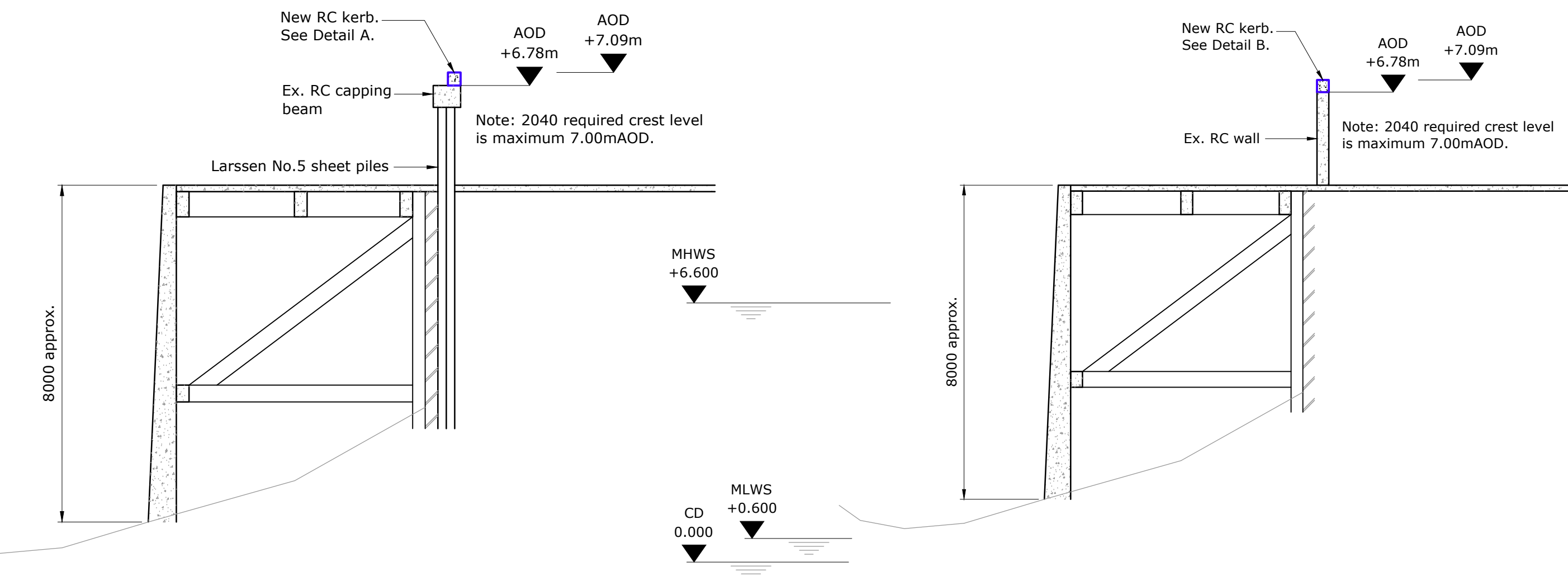
01284 764085 . www.pdeconsulting.co.uk



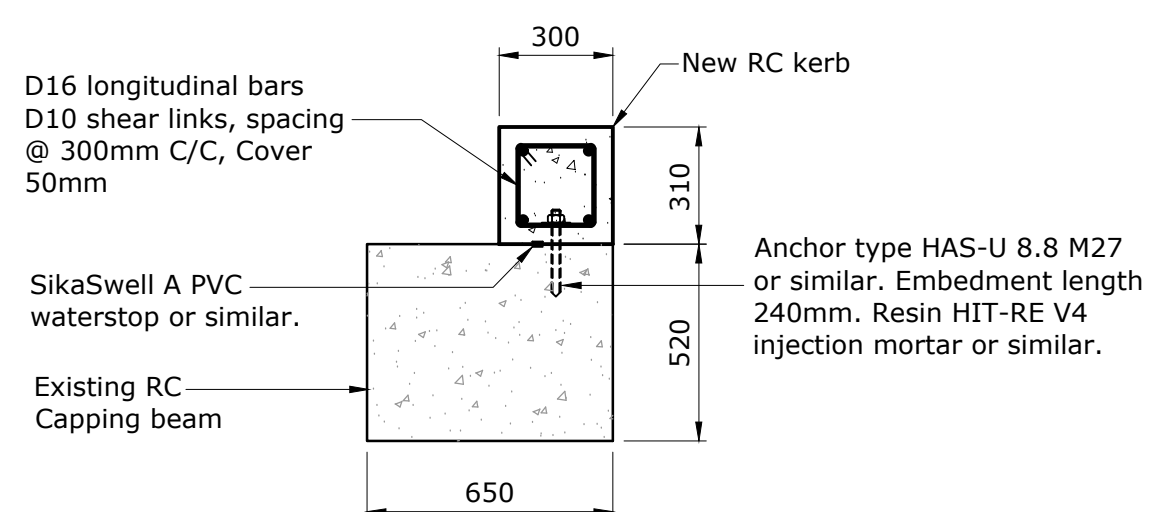
Aerial View



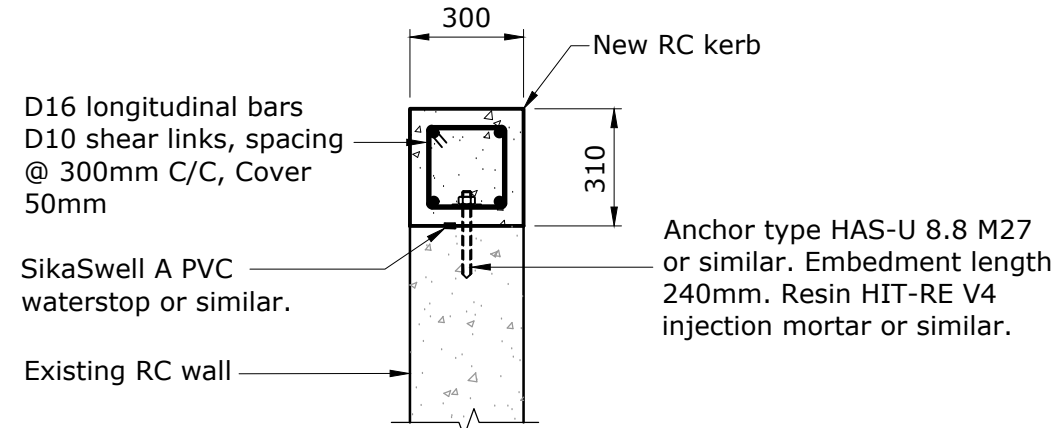
Section 1 - 1
Typical Transverse Section Wall 2 & 3
(Scale 1:100)



Section 2 - 2
Typical Transverse Section Wall 7
(Scale 1:100)



Detail A
Connection Kerb and Existing
Reinforced Concrete Elements
(Scale 1:20)



Detail B
Connection Kerb and Existing
Reinforced Concrete Elements
(Scale 1:20)

1. This drawing is to be read in conjunction with structural inspection report 317181-FG-WG-XX-RP-C-3101.
2. Dimensions provided are approximations based on inspection engineer site visit and should be verified by a measured survey prior to any design or construction works.
3. A tactile inspection was carried out where possible and visual inspections were carried out in areas where tactile access could not be gained.
4. Refer to structural inspection report, Table 1 for table showing inspected structural elements, Table 2 & Table 3 for tables showing piles UTM.
5. Work on figured dimension only.
6. Capping beam and concrete wall dimension to be confirmed prior to works commencing.

- All reinforced concrete to be constructed in C32/40 sulphate resisting concrete, class XS2 & secondary XF1.
- Maximum w/c ratio 0.45.
- Minimum cement/combination content 300 kg/m³.
- Cement and combination designation IIB-V, IIIA.
- Maximum aggregate size 20 mm.
- Chloride content Cl 0.40.
- Consistence class S3.
- All fabricated reinforcement to be in accordance with the current codes of Practice.

THE COPYRIGHT OF THE DRAWING AND DESIGN IS THE PROPERTY OF THE COMPANY. THIS INFORMATION HAS BEEN ISSUED UNDER SPECIFIC TERMS FOR THIS PROJECT AND MAY ONLY BE USED AND REPRODUCED ACCORDINGLY.

P02	13.02.23	AV	SS	LD	Preliminary issue	
P01	18.11.22	AV	SS	LD	Preliminary issue	
Rev	Date	By	Chk	Apr	Comment	

BRINGING IDEAS TO LIFE	 FRANKHAM Frankham Consultancy Group Limited E: enquire@frankham.com www.frankham.com	Project Title: Imperial Wharf Flood Defence Kerb Design	Client: 							
		Drawing Title: General Arrangement Kerb	Drawn by: AV Designed by: AV Checked by: SS Approved by: LD							
	SIDCUP OFFICE Trene House Five Arches Business Park Maldenstone Road Sidcup, Kent DA14 9AE T: 020 8399 7777	OXFORD OFFICE Citibase Oxford New Barclay House 234 Bridge Road Oxford OX2 0HP T: 01865 322500	Original Issue Date: 18/11/2022	Scale @ A1: As shown						
LONDON OFFICE First Floor Bridge House 181 Queen Victoria Street London EC4V 4EG T: 020 7551 0790	STEVENAGE OFFICE Suite 237, Second Floor Kings Court Business Centre London Road, Stevenage Hertfordshire SG1 2NG T: 0203 3714 7063	Job No / File Ref 317181	Originator FCG	Zone SW	Level XX	Type DR	Discipline C	Number 3405	Suitability S2	Revision P02
						PRELIMINARY ISSUE				