

## MOORING SURVEY REPORT



**SYSTRA**

# TWICKENHAM RIVERSIDE

## MOORING SURVEY REPORT

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# 1. INTRODUCTION

## 1.1 Study Purpose

1.1.1 SYSTRA Ltd. (SYSTRA) have been commissioned by the London Borough of Richmond upon Thames (LBRuT) (the Client) to undertake mooring surveys and subsequent analysis and reporting along a stretch of the River Thames, on The Embankment between the Eel Pie Island pedestrian footbridge and Wharf Lane.

1.1.2 This study aims to understand mooring survey patterns, to support LBRuT's ambition to construct a pontoon and floating eco-system along the River Thames, to improve aquatic bio-diversity within the area. This survey has been undertaken to understand if it is feasible to introduce the above measures, based on existing levels of mooring.

1.1.3 The survey has been designed to capture the following:

- Frequency that the riverside is used;
- The size craft;
- Duration spent in the riverside;
- Exact location of mooring; and
- Number of passengers mounting / dismounting if appropriate.

1.1.4 It is noted that the data captures both mooring and any boats stationery along the riverside. The data does not show any boats which were passing the area.

1.1.5 The area of the River Thames where the surveys were undertaken is shown in **Figure 1** overleaf. The survey area has been split into four zones, with three mooring points present, located in zone 2, zone 3 and zone 4 respectively. In addition, zone 4 contains steps to the west to provide access to and from The Embankment.

1.1.6 The pontoon is proposed to be created in zone 4, to the east of the existing mooring point. The floating eco-system is proposed to cover both zones 1 and 2. The proposed location of both the pontoon and floating eco-system can be found in **Appendix A**.

**Figure 1. Survey Area Extent**



1.1.7 The mooring surveys were undertaken between 06:00-22:00, on the dates highlighted below. The surveys were undertaken by Traffic Data Centre, using video cameras, covering the full extent of the survey area.

- Saturday 22<sup>nd</sup> January 2022;
- Sunday 23<sup>rd</sup> January 2022;
- Tuesday 25<sup>th</sup> January 2022;
- Wednesday 26<sup>th</sup> January 2022;
- Saturday 29<sup>th</sup> January 2022;
- Sunday 30<sup>th</sup> January 2022;
- Tuesday 1<sup>st</sup> February 2022; and
- Wednesday 2<sup>nd</sup> February 2022.

## 1.2 Report Structure

1.2.1 This report is structured as follows:

- **Section 2 – Survey Analysis:** presents data analysis of the mooring surveys to understand patterns within the survey area.
- **Section 3 – Summary & Conclusion:** provides a summary of the findings and an overall objective conclusion based on the data analysis to understand if there is an impact of creating a pontoon and floating eco-system on vessels which are mooring or stationary along the riverside.

## 2. SURVEY ANALYSIS

### 2.1 General

2.1.1 This section of the report summarises the results of the mooring surveys undertaken. It is noted that no mooring activity was observed on Saturday 22<sup>nd</sup> January, Sunday 23<sup>rd</sup> January, Tuesday 25<sup>th</sup> January, Wednesday 26<sup>th</sup> January and Wednesday 2<sup>nd</sup> February 2022.

### 2.2 Key Findings

2.2.1 **Table 1** presents a summary of the key findings from the survey, with further detailed analysis for each factor in this table provided in subsequent sections. It is noted that the video footage has been used to determine whether the vessels are motorised or non-motorised where possible, however it is caveated that this classification is subjective based on the available video footage.

**Table 1. Survey Analysis Summary**

BOAT	DATE	LOCATION	SIZE OF CRAFT	DURATION SPENT AT RIVERSIDE (STATIONARY OR MOORING)	NO. OF PASSENGERS MOUNTING/ DISMOUNTING
Boat 1	Saturday 29 <sup>th</sup> January	Zone 4 Steps	Small Motorised	00:00:40	1
Boat 2	Sunday 30 <sup>th</sup> January	Zone 4 Steps	Small Motorised	00:03:10	0
Boat 3	Sunday 30 <sup>th</sup> January	Zone 4 Steps	Small Motorised	00:00:50	1
Boat 4	Sunday 30 <sup>th</sup> January	Zone 4 Steps	Small Motorised	00:00:55	1
Boat 5	Tuesday 1 <sup>st</sup> February	Zone 4 Mooring Point	Small Motorised	00:26:10	0

BOAT	DATE	LOCATION	SIZE OF CRAFT	DURATION SPENT AT RIVERSIDE (STATIONARY OR MOORING)	NO. OF PASSENGERS MOUNTING/ DISMOUNTING
Boat 6	Tuesday 1 <sup>st</sup> February	Zone 2, just east of the Mooring Point	Medium Motorised	00:00:24	1

## 2.3 Frequency

2.3.1 There was a low frequency of mooring activity or boats stopping in the survey area across the survey dates. In total, one boat was observed on Saturday 29<sup>th</sup>, three boats were observed on Sunday 30<sup>th</sup> and two boats were observed on Tuesday 1<sup>st</sup>. They have been classified as the following throughout the report:

- Boat 1 – observed on Saturday 29<sup>th</sup>
- Boat 2,3,4 – observed on Sunday 30<sup>th</sup>, numbered consecutively based on arrival time; and
- Boat 5, 6 – observed on Tuesday 1<sup>st</sup>, numbered consecutively based on arrival time.

## 2.4 Location of Mooring

2.4.1 Boat 6 was observed stopping within zone 2, just east of the mooring point within this zone. All other boats were observed within zone 4, with Boat 5 using the zone 4 mooring point and the other boats stopping in close proximity to the zone 4 steps. **Figure 2** shows the location of the mooring point in zone 4, in relation to the riverside. There are steps located to the west of the mooring point, outside of the extent of the image.

**Figure 2. Mooring Point and Steps in Zone 4**





2.4.2 **Figure 3** shows the exact location of each boat observed as either mooring or stationary .

**Figure 3. Location of Boats observed as Mooring or Stationary**



Source: Bing Maps

## 2.5 Size of Craft

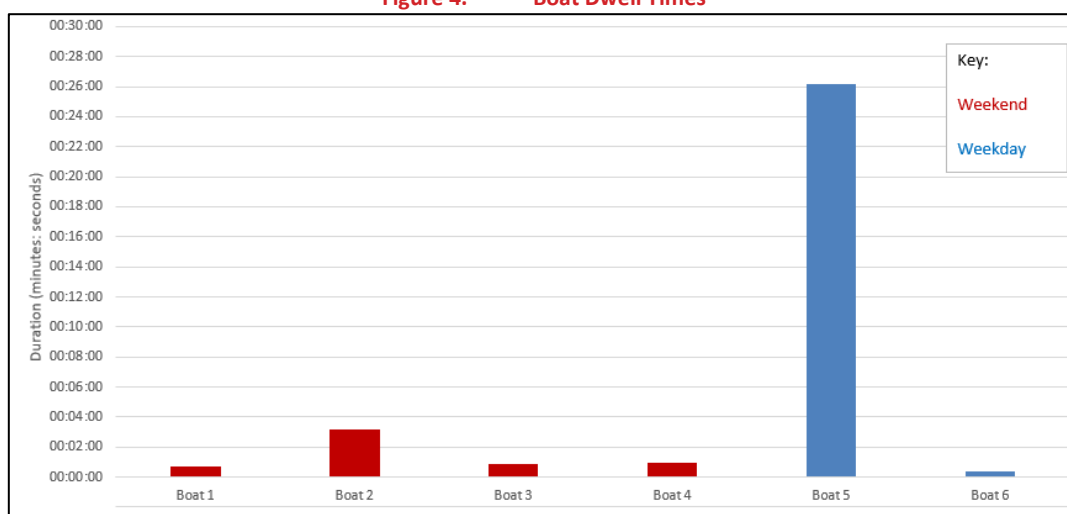
2.5.1 Boat 6 is considered a 'medium' size motor boat. All other crafts observed along the riverside were considered as 'small' motor boats. All recorded boats have an approximate length of less than 30ft, which has been estimated from video footage.

## 2.6 Duration

2.6.1 The dwell time that boats spent within the area is highlighted in **Figure 4** below. The red bars represent the weekend observations and the blue bars represent the weekday observations. It is noted that boats arrived at the following times:

- Boat 1 – 11:20:09
- Boat 2 – 11:17:19
- Boat 3 – 11:55:40
- Boat 4 – 13:33:24
- Boat 5 – 14:13:40
- Boat 6 – 15:58:49

**Figure 4. Boat Dwell Times**



2.6.2 Boat 5 was recorded to have the highest dwell time at 26 minutes and 10 seconds. Boat 2 had a dwell time of 3 minutes and 10 seconds. All other boats had a dwell time of under one minute.

## 2.7 Passengers Mounting / Dismounting

2.7.1 **Table 2** below shows the number of passengers mounting/ dismounting from the associated boats. The numbers represent passengers who fully mounted/ dismounted and do not show those who dismount and then remount in the same timeframe that the boat was stationary for, comments have been added to boat 2 where this applies. Comments are provided in relation to the mounting/dismounting location.

Table 2. Passengers Mounting / Dismounting

BOAT	MOUNTING	DISMOUNTING	COMMENTS
Boat 1	1	0	Stationary at steps in zone 4 to allow passenger to mount.
Boat 2	0	0	Stationary at steps in zone 4, passenger dismounts, however re-mounts shortly after.
Boat 3	1	0	Stationary at steps in zone 4 to allow passenger to mount.
Boat 4	0	1	Stationary at steps in zone 4 to allow passenger to dismount.
Boat 5	0	0	Using zone 4 mooring point, no passengers mount or dismount.
Boat 6	1	0	Stationary within zone 2, passenger climbs on rails and then mounts.
<b>Total</b>	<b>3</b>	<b>1</b>	<b>NA</b>

2.7.2 As can be seen, in total three passengers were noted mounting and one passenger was noted to be dismounting.

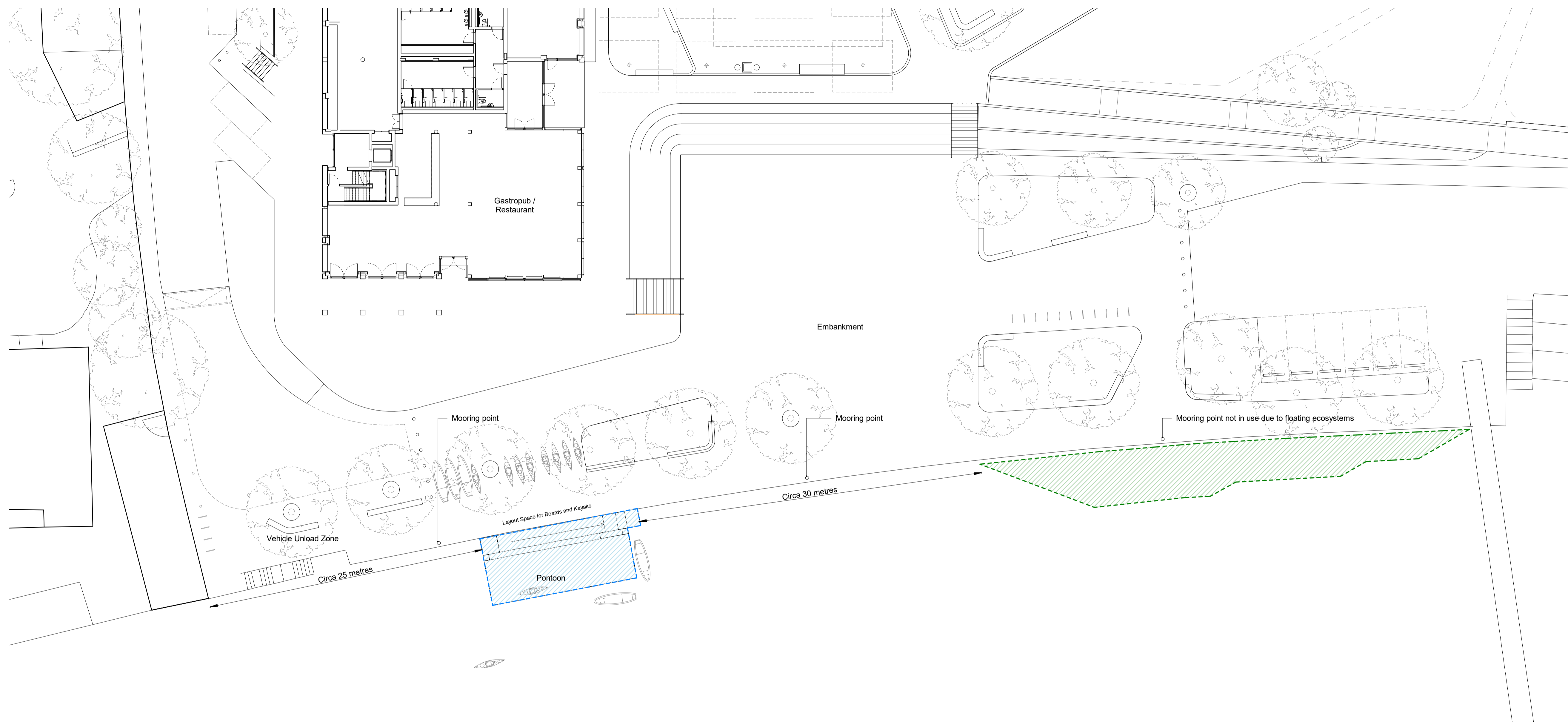
### 3. SUMMARY & CONCLUSION

- 3.1.1 In summary, boats were only observed on three out of the six survey dates, on Saturday 29<sup>th</sup> January, Sunday 30<sup>th</sup> January and Tuesday 1<sup>st</sup> February 2022.
- 3.1.2 Boat 5 was the only vessel observed formally mooring, using the mooring point in zone 4. It was a small motorised vessel and had the longest dwell time of 26 minutes and 10 seconds.
- 3.1.3 Boat 6 was noted as the only medium motorised vessel, and was observed to be stationery within zone 2. The boat was only stationery for 24 seconds to allow a passenger to mount.
- 3.1.4 There were four boats stationary by the steps in zone 4 for passenger mounting / dismounting, the majority of which had a dwell time of under one minute. All these boats were noted as small motorised vessels.

#### 3.2 Overall Conclusion

- 3.2.1 The mooring surveys and analysis undertaken suggests that the introduction of a pontoon and floating eco-system, would not have a detrimental impact on the ability of boats to moor or stop along this section of the riverside. This is due to the low frequency of boats observed, the duration of time that vessels spend mooring or stationery and the size of crafts noted.
- 3.2.2 Given that over 83% of vessels observed during the surveys were noted mooring or stationery within zone 4, the location of the floating eco-system in zone 1 and 2, will have the least disruption on mooring and vessels stopping within this section of the riverside. Consequently, it can be seen that any impact of proposals is negligible on mooring patterns and stationery vessels given the low frequency of demand.
- 3.2.3 The proposed location of the pontoon to the east of the mooring point in zone 4 is favourable, given the highest demand for mooring and stationary boats is recorded within this zone. This would provide a suitable location to mount and dismount and sufficient space is still provided to access the zone 4 steps as required.
- 3.2.4 The creation of a pontoon and floating eco-system is not considered to disrupt mooring patterns or stationery boats, based on the survey concluding the majority of vessels use zone 4, along this section of the River Thames.

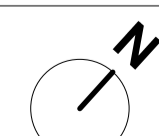
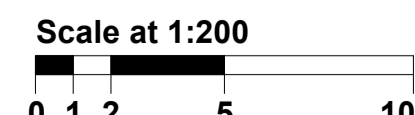
## Appendix A – Proposed Location for Pontoon and Floating Eco-System



- Key:
- Proposed Floating Ecosystems
  - Proposed Pontoon

Date	Rev.	Description	Approved By
17/02/2022	C01	M268 - Issue to Planning Officers	MB

Date	Rev.	Description	Approved By

  
**PLANNING**  
 Scale at 1:200  


Project	Twickenham Riverside	Code	TRS	File Name	Number	Rev.
Subject	Embankment Area - Mooring Points			TRS-HAL-01-00-DR-A-	<b>SK-245</b>	<b>C01</b>
Architects	Hopkins Architects Limited 27 Broadley Terrace, London, NW1 6LG T: 020 7124 1751 E: mail@hopkins.co.uk			Date	02/11/22	Scale 1 : 200 at A1

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The SYSTRA logo is rendered in a bold, red, sans-serif typeface. The letters are thick and closely spaced, with a distinctive design where the 'S' and 'Y' have a slightly irregular, hand-drawn quality. The 'S' starts with a small hook, and the 'Y' has a sharp, pointed bottom. The 'T' is a simple, blocky shape, and the 'R' has a curved tail. The 'A' is also blocky with a slightly open top. The overall appearance is modern and professional.