Technical Note

Project:	Uxbridge
Subject:	Flood Compensation – Western Park

Document history

Job number: 5105977			**Document ref: 5105977-UXB-OUT-0661**			
Revision	**Purpose description**	**Originated**	**Checked**	**Reviewed**	**Authorised**	**Date**
-	Draft for comments	TL	CN	KMR	MR	01/11/13
A	For EA Approval	TL	CN	MR	MR	28/11/13

INTRODUCTION

A flood risk assessment report (FRA) has been prepared by Halcrow on behalf of VSM Estates Ltd for the development at RAF Uxbridge in London. The approved FRA was document No PDFMRU034, issue F dated 15/9/10. Following that, Atkins has been commissioned by VSM to undertake the detailed design of the Uxbridge scheme.

Within the FRA, it refers to flood compensation and outlines the volumes and levels needed to achieve this compensation. The sketches PDFMRU302-305 within the report outlined two different areas of flood compensation volume.

Due to the constraints such as dense woodland imposed on the southern area, it is proposed to combine the two compensatory flood storage areas into one by relocating the southern area to the northern area.

An email which outlined this proposal has been sent to the Environment Agency (EA) on the 7/10/2013. EA responded to the email on 22/10/2013 requesting to demonstrate that 56m^3 of compensatory flood storage can be provide within a single northern area by updating the drawings and Table 7.1. Refer to Appendix A for the EA's letter dated 22/10/2013 for details.

The following Addendum 01 outlines the proposal of a single compensatory flood storage in the northern area.

ADDENDUM 01 – TO PARAGRAPH 3.10.2

Compensatory Storage

This development does encroach onto flood plain therefore compensatory flood plain storage has been proposed. This is illustrated on plan number PDFMRU 301 within Appendix F within the approved FRA PDFMRU034. Environment Agency requirements state that no floodplain storage can be removed; therefore the storage volume removed by building on the development site must be accommodated elsewhere on a level for level basis.

One area on the eastern bank of the River Pinn have been identified as storage area to compensate for storage lost to the development, refer to drawing numbers 5124127/UXB/EA 3000, 3001 and 3002 within Appendix B. Level-for-level storage volumes were calculated for these sites. These calculate, for each elevation, the amount of storage needed to ensure that no floodplain storage is lost by developing the site at each level band.

The compensation sites are broken into a 140mm and 200 mm bands between 33.60m and 33.94m. This ensures a level for level match to the area in which the development encroaches onto floodplain. All results are presented in the table 7.1 below.

Volume removed from Flood Area		**Proposed Compensation**	
		NORTH AREA ONLY	
Flood Level	Interval Volume	Flood Level	Interval Volume
33.60m – 33.74m	31.4m^3	33.60 – 33.74	34.60m^3
33.74m – 33.94m	24.6m^3	33.74 – 33.94	31.20m^3
TOTALS	**56m^3**		**65.8m^3**

Amended Table 7.1 Compensatory storage volumes

Amended Table 7.1 shows that the development would remove 56m^3 of storage from the floodplain. The proposed storage sites would provide 65.8m^3 of volume. This means no volume has been lost from the floodplain.

Proposed contours of the compensation areas are shown on drawing number 5124127/UXB/EA /3002 within Appendix B.

Conclusion

The Addendum 01 has demonstrated that 56m^3 of compensatory flood storage can be provided within a single northern area.

APPENDIX A

EA letter dated 22 October 2013

APPENDIX B

PDFMRU301	-	FLOOD PLAIN REDUCTION
51241247/UXB/EA/3000	-	COMPENSATION STOARGE – LOCATION PLAN
51241247/UXB/EA/3001	-	COMPENSATION STOARGE – FLOOD AREA NORTH
51241247/UXB/EA/3002	-	COMPENSATION STOARGE – FLOOD AREA LEVELS