Appendix B: Project Description

Appendix B Table 1: Key changes between the LTFRMS and the Project, and the reason for this change

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Channel Section / Weir	Key changes from LTFRMS design	Overriding reasons for change
Channel Section 1	Sunnymeads 5 and 6 lakes have been incorporated into the flood relief channel and the location of the separation embankments through Kingsmead Island Lake have been moved further north to join up the islands within the lake.	Economic Environmental
Channel Section 1	The flood relief channel alignment through the Horton area has been moved south west and now runs parallel to the railway line.	Economic
Channel Section 1	Where the Horton Brook flows in and out of the intersection between Kingsmead Island lake and Kingsmead 1 Lake (600m upstream of the flood relief channel intersection with the Horton Brook) the brook will be isolated from the lakes by providing a penstock / tilting weir at the inlet.	Environmental
Channel Section 1	The flood relief channel in the area of Wraysbury 2 lakes has been diverted away from the historic landfill to the east and will instead flow through Wraysbury 2 (North and South), constrained to the eastern side by separation embankments.	Environmental Economic Technical feasibility
Channel Section 1	The flood relief channel in the area of Wraysbury 2 lakes has been diverted away from the historic landfill to the east and will instead flow through Wraysbury 2 (North and South), with no separation embankments.	Environmental Economic Technical feasibility
Channel Section 1	The route through Lower Hythe Gravel Pit lakes has been realigned to avoid flowing through Lower Hythe Gravel Pit 1.	Landowner
Channel Section 2	The flood relief channel within the immediate vicinity of Thorpe Hay Meadow SSSI has been constrained to a vertical sided, sheet piled channel, avoiding directly affecting the meadow.	Environmental
Channel Section 2	Navigation through Thorpe Park lakes has not been incorporated into the design	Economic Landowner
Channel Section 2	Downstream of the Thorpe Park Lakes the flood relief channel has been moved, crossing Chertsey Lane (A320) approximately 150m further south and therefore avoiding Abbey 1 lake entirely and flowing directly into Abbey 2.	Environmental Economic Community
Channel Section 2	The flood relief channel in the Abbey Meads area has evolved from a trapezoidal channel to a wider two stage, braided, channel. Abbey River will carry the augmentation flow.	Environmental Community
Channel Section 3	Channel Section 3 southern spur, through Littleton South has been removed. The flood relief channel instead will pass through a new bridge under the M3 from Sheepwalk West 2 lake, passing through Sheepwalk landfill site and avoiding Sheepwalk East lake. The intake flow control structure for Channel Section 3 has also been moved from adjacent to the River Thames to between Littleton North and Littleton East.	Economic Technical feasibility Community
Channel Section 3	The flood relief channel through Littleton East lake and Sheepwalk West 2 lake will no longer be constrained by separation	Environmental

Channel Section / Weir	Key changes from LTFRMS design	Overriding reasons for change
	embankments.	Economic Community
Desborough Cut	Desborough Cut will be widened on the left bank, rather than the right bank.	Community
Sunbury Weir	The capacity improvements at Sunbury Weir have been changed from replacing the existing overfall weirs, to constructing a new weir cut through Sunbury Lock Island.	Technical
Sunbury Weir	The location of the capacity improvements has been selected to avoid the Middle Thames Yacht Club.	Community
Molesey Weir	The capacity improvements at Molesey Weir have been changed from replacing the overfall weirs at Weir A to replacing those at Weir C.	Technical
Teddington Weir	The capacity improvements at Teddington Weir have been changed from replacing the existing overfall weirs, to constructing a new weir cut through Teddington Lock Island.	Technical
All capacity improvement weirs	The option of reducing the number of gates required at each weir and dredging sections of the River Thames instead was considered and discounted.	Environmental Technical Economic
Downstream of Teddington Weir	A flood storage area at Ham Lands.	Technical
Project wide	Additional storage at existing Thames Water Reservoirs.	Technical
Project wide	Material excavated during construction will be reused to construct LEAs of publicly accessible open space, including habitat creation with raised landforms.	Economic
Project wide	An augmentation flow of approximately 0.5-1m^3/s will be included within the project design to enable fish passage.	Environmental