**#BritainsHeathrow** 

#### **TECHNICAL SUBMISSION - VOLUME 3**



# Taking Britain further Heathrow's plan for connecting the UK to growth



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# **Contents of A3 appendices to Technical submission**

7	Our vision for a world class hub - Daylight	1
8	Our vision for a world class hub - Dusk	1
9	Our vision for a world class hub - Integrated Transport hub	
10	Refreshed north west masterplan 5	1
11	Refreshed north west masterplan: Sub-surface layout	2
12a	Refreshed north west masterplan: Minimum connection time summary – Intra-terminal	2
12b	Refreshed north west masterplan: Minimum connection time summary – Inter-terminal	2
13	Refreshed north west masterplan: Terminal and apron sizing summary	2
14	Cost Plan Summary	2
15	Refreshed north west masterplan: M25 Junction 14/14a/15 Layout 11	2
15a	Refreshed north west masterplan: M25 profile	2
15b	Refreshed north west masterplan: Junction 15 link profiles	2
15c	Refreshed north west masterplan: A4 profile sheet 1	2
15d	Refreshed north west masterplan: A4 profile sheet 2	2
15e	Refreshed north west masterplan: M25 operating concept	2
15f	Refreshed north west masterplan: M25 and rivers cross sections 17	3
15g	Refreshed north west masterplan: M25 signage proposals	3
15h	Refreshed north west masterplan: Junction 14 geometric planning 19	3
16	Refreshed north west masterplan: Earthworks overall cut and fill balance	3
16a	Refreshed north west masterplan: Earthworks section A-A proposed Runway 3 profile21	3
16b	Refreshed north west masterplan: Earthworks section B-B M25 alignment	3
16c	Refreshed north west masterplan: Earthworks section C-C Apron 6	3
16d	Refreshed north west masterplan: Earthworks section D-D T5/T6 Spur to M25 Junction 14a 24	

17	Summary of key mitigation measures	25
18	Minimise total people overflown - change in noise level using the summer LAeq, 16hr metric within the "area of interest" between 2011 and 2030	26
19	Minimise new people overflown - change in noise level using the summer LAeq, 16hr metric within the "area of interest" between 2011 and 2030	27
20	Maximise respite for those people overflown - change in noise level using the summer LAeq, 16hr metric within the "area of interest" between 2011 and 2030	28
21	Plan of Harmondsworth showing Residential Properties	29
22	Plan of Sipson showing Residential Properties	30
23	Illustrative Landscape Masterplan	31
24	Key Rivers and Associated Environment Agency Flood Zones	32
25	Flood Risk Mitigation Strategy	33
26	Illustrative Sections through Enhanced New Areas of Colne Valley Park	34
27	WFD River Waterbody Status	35
28	European Wildlife Sites	36
29	Influence of Mitigation Strategy on River Flows	37
30	Designated Wildlife Sites	38
31	Registered Parks and Gardens within the Projected Area of Operation	39
32	Designated Heritage Assets and Extents of Historic Extractive Activities	40
33	Designated Heritage Assets and Extents of Historic Extractive Activities	41
34	Designated Heritage Assets and Extents of Historic Extractive Activities	42
35	Drainage Strategy Layout Plan	43
36	Construction Schedule	44

# 7 Our vision for a world class hub - Daylight



Volume 3 - Taking Britain further – A3 Appendices Page 2

### 8 Our vision for a world class hub - Dusk



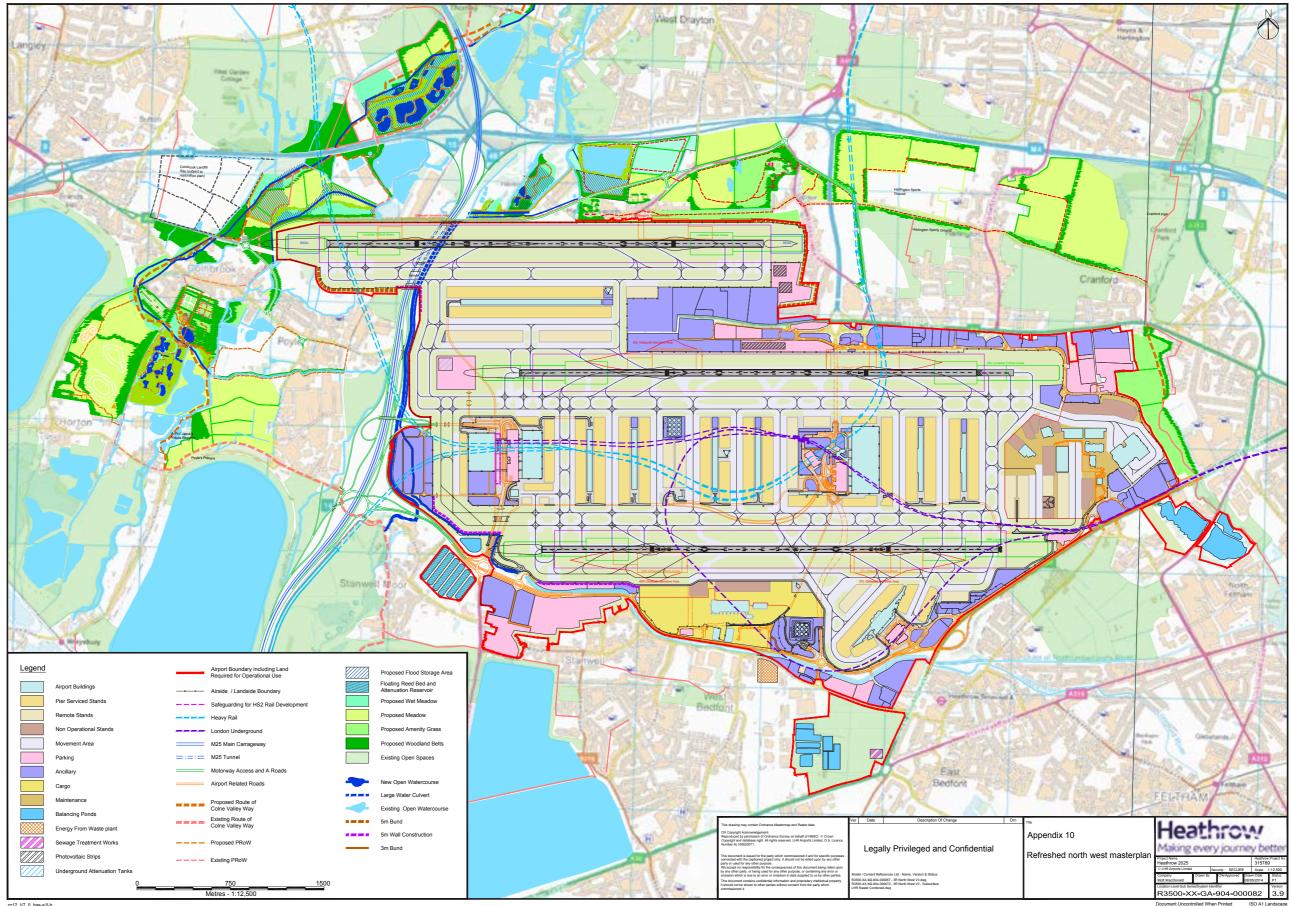
Volume 3 - Taking Britain further – A3 Appendices Page 3



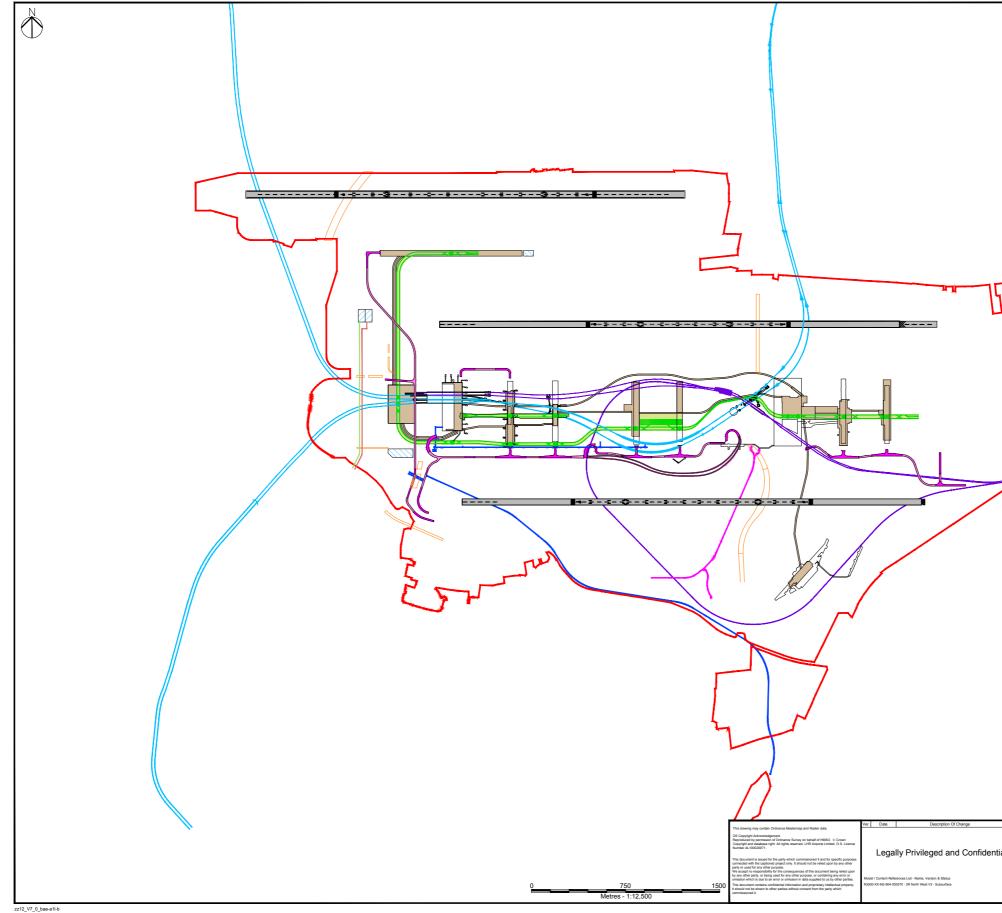
# 9 Our vision for a world class hub- Integrated Transport hub

Volume 3 - Taking Britain further – A3 Appendices Page 4

## 10 Refreshed north west masterplan



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# 11 Refreshed north west masterplan: Sub-surface layout

		Legend
		Airside Connectivity         Intra Terminal Airside TTS         Baggage Tunnels & Basements         Airside Roads         Surface Access         Landside Roads         Landside Roads         Landside Roads         Landside Roads         Heavy Rail         HS2 High Speed Rail         Other         Services and Drainage         Airport Boundary         Underground Attenuation Tanks         Clean Drainage Pipe         Dirty Drainage Pipe
		Dirty Drainage Pipe
om.	™ Appendix 11 Refreshed north west masterplan Sub-surface layout	Heather the state of the state

#### 12a Refreshed north west masterplan: Minimum connection time summary – Intra-terminal

#### Refreshed north west masterplan: Minimum connection time summary Intra-terminal metrics

#### Assumptions - Passengers

- Assume all transfer passengers are short connects and arrive and depart on pier-served stands
- Assume passengers are short connects and arrive and obpart on per-served stands
   Assume passengers are transferring between international services therefore no immigration processes are considered
   No travellators are taken into consideration hence all horizontal transitions within a terminal are assumed to be covered by walking
   The TTS average speed between satellites is assumed to be increased by a factor of 25% due to higher speed and the reduced proportion of acceleration/deceleration times
   Assume Concourse C TTS station includes a transfer security area in the mezzanime corridor (7m height)
   Vertical profiles for T6 terminal/piers are assumed to be the same as in T2 (i.e. TTS at basement level)

- Assumes longest distance between stand of arrival and departure, excluding arrival and departure from same pier

#### Disembarking Overall 6 min Doors open Passengers disembark 3 min 3 min Passenger flow Walking speed 1 m/s Escalator speed (assumed 10m per level) 0.83 min/level >> Assume 30° elevation angle and speed of 0.4 m/s TTS Platform Waiting time (worst case scenario) Doors open 2 min 5 sec Dwelling time at the platform 0.5 min Travel time between satellites (same apron, 350m) 1 min TTS average speed between aprons (+25%) 7.3 m/s >> 26.25 km/h Boarding Card Check Boarding Card Queue 1 min Boarding Card Process 0.1 min urity Scree ning Security Screening queue 5 min Security Screening Total Time in Process 2.0 min

#### 3R NW - PASSENGERS

T2 Concourse E - Concourse A via Concourse C			Time (s)	Time (min)
Disembarking			360	6.0
Arrival Gate to Conc E TTS Platform (walking)	350	m	350	5.8
Arrival Gate to Conc E TTS Platform (escalator)	3	levels	150	2.5
TTS Wait			120	2.0
TTS Doors opening			5	0.1
TTS Platform dwell			30	0.5
TTS Travel Conc E - Conc D + Platform dwelling	1	piers	90	1.5
TTS Travel between Conc D - Conc C	1000	m	137	2.3
TTS Platform dwell			30	0.5
TTS Travel Conc C - Conc A + Platform dwelling Conc B	2	piers	150	2.5
TTS Doors opening			5	0.1
Conc A TTS Platform to Conc A TTS Security (escalator)	2	levels	100	1.7
Conc A TTS Platform to Conc A Security (walking)	50	m	50	0.8
Conc A Boarding Card queue			60	1.0
Conc A Boarding Card Process			6	0.1
Conc A Security Screening queue			300	5.0
Conc A TTS Security Screening process			120	2.0
Conc A Security to Departure Gate (escalator)	1	levels	50	0.8
Conc A Security to Departure Gate (walking)	210	m	210	3.5
Buffer *			300	5.0
			TOTAL	43.7

T4 (V-Pier) - T4 (North Pi	ier)	Time (s)	Time (min)
Disembarking (End of Victor Pier)		360	6.0
Arrival Gate to Security Search (walking)	780 m	780	13.0
Boarding Card Queue		60	1.0
Boarding Card Process		6	0.1
Security Screening Queue		300	5.0
Security Screening Process		120.0	2.0
Security to Departure Gate (escalator)	1 levels	50	0.8
Security to Departure Gate (walking)	490 m	490	8.2
Buffer *		300	5.0
		TOTAL	41.1

#### Assumptions - Bags

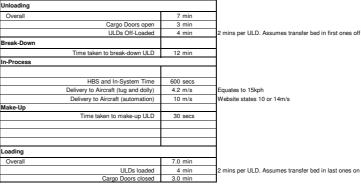
Disembarking Arrival Gate to Conc F TTS Platform (walking) Arrival Gate to Conc F TTS Platform (escalator) TTS Wait TTS Dators opening TTS Platform dwell TTS Travel between Conc F - Conc H + Platform dwelling TTS Travel between Conc F - Conc H + Platform dwelling

TS Doors opening one H TTS Platform to Conc H Security (escalato one H TTS Platform to Conc H Security (walking)

Conc H 11S Platform to Conc H Security (waik Boarding Card Queue Boarding Card Process Conc H Security Screening queue Conc H Security Screening process Conc H Security to Departure Gate (escalator) Conc H Security to Departure Gate (walking)

Buffer

- Assume all transfer bags are short connects and arrive and depart on pier-served stands It is assumed that all core processors and satellites have adequate break-up, make-up and HBS facilities fonecting bags
 - Assumes all piers and processors have head of stand delivery facilities for short connect and late bags, ex
 - All inter-terminal bag transfers go via core processor to core processor
 - All short-connect bags travel via automated systems, except around T4 - All short connect bags go through HBS at satellite of departure



2 levels

2 piers

4 levels 50 m

1 levels 250 m

TOTA

Time (s) Time (min)

0.8

5.0

39.3

\* Includes 5min buffer between pax reaching gate and chocks off.

#### 3R NW - BAGS

T2 Concourse E - Concourse A via C	Time (s)	Time (min)	
Unloading	420	7.0	
ULD to break-down area (t + d)	250 m	60	1.0
ULD break-down		720	12.0
Bag transfer from Conc E to Conc C (auto)	1500 m	150	2.5
Bag transfer from Conc C to Conc A (auto)	650 m	65	1.1
HBS and In-System Time		600	10.0
Loading		120	2.0
Buffer *		300	5.0
		TOTAL	40.6

T4 (V-Pier) - T4 (No	Time (s)	Time (min)	
Unloading		420	7.0
ULD to break-down area (t + d)	750 m	179	3.0
ULD break-down		720	12.0
HBS and In-System Time		600	10.0
Deliver ULD to aircraft (t + d)	500 m	119	2.0
Loading		120	2.0
Buffer *		300	5.0
		TOTAL	41.0

T5 Concourse F - Councourse H		Time (s)	Time (min)
Unloading		420	7.0
ULD to break-down area (t + d)	240 m	57	1.0
ULD break-down		720	12.0
Bag transfer from Conc F to Conc H (auto)	750 m	75	1.3
HBS and In-System Time		600	10.0
Loading		120	2.0
Buffer *		300	5.0
		TOTAL	38.2

Includes 5min buffer between bags being loaded and chocks off.

T6 Concourse K - Concourse J			Time (s)	Time (min)
Disembarking			360	6.0
Arrival Gate to Conc K TTS Platform (walking)	550	m	550	9.2
Arrival Gate to Conc K TTS Platform (escalator)	2	levels	100	1.7
TTS Wait			120	2.0
TTS Doors opening			5	0.1
TTS Platform dwell			30	0.5
TTS Travel Conc K - Conc J	0	piers	0	0.0
IS Travel Conc K - Conc J	1700	m	233	3.9
TTS Doors opening			5	0.1
Conc J TTS Platform to Conc J Security (escalators)	4	levels	200	3.3
Conc J TTS Platform to Conc J Security (walking)	100	m	100	1.7
Boarding Card Queue			60	1.0
Boarding Card Process			6	0.1
Conc J Security Screening queue			300	5.0
Conc J Security Screening process			120	2.0
Conc J Security to Departure Gate (escalator)	1	levels	50	0.8
Conc J Security to Departure Gate (walking)	150	m	150	2.5
Buffer *			300	5.0
Buller	_		TOTAL	44.8

T6 Concourse K - Concourse J		Time (s)	Time (min)
Unloading	420	7.0	
ULD to break-down area (t + d)	650 m	155	2.6
ULD break-down		720	12.0
Bag transfer from Conc K to Conc J (auto)	1400 m	140	2.3
HBS and In-System Time		600	10.0
Loading		120	2.0
Buffer *		300	5.0
		TOTAL	40.9

#### 12b Refreshed north west masterplan: Minimum connection time summary – Inter-terminal

Refreshed north west masterplan: Minimum connection time summary

Inter-terminal metrics

#### Assumptions

- Assume all transfer passengers are short connects and arrive and depart on pier-served stands
- Assume passengers are transferring between international services therefore no immigration processes are considered
- No travellators are taken into consideration hence all horizontal transitions within a terminal are assumed to be covered by walking
   The TTS average speed between satellites is assumed to be increased by a factor of 25% due to higher speed and the reduced proportion of acceleration/deceleration times
- Vertical profiles for T6 are assumed to be the same as in T2 (i.e. TTS at basement level)
- Airside coach maximum speed is 5 mph (8 km/h) in apron roads; 20 mph (32.2 km/h) in airside roads; and 30 mph (48.3 km/h) inside the cargo tunnels
- Assume a factor of -25% to be applied to the maximum coach speed to account for apron circulation, and acceleration/deceleration at intersections and junctions
- Assume airside coach travel only stops at main processors between terminal pairs
- TTS connecting T2 and T5 stops at all concourses

Disembarking			]
Overall	6	min	
Doors open	3	min	
Passengers disembark	3	min	
Passenger flow			
Walking speed	1	m/s	
Escalator speed (assumed 10m per level)	0.83	min/level	>> Assume 30° elevation angle and speed of 0.4 m
TTS Platform			
Waiting time (worst case scenario)	2	min	
Doors open	5	Sec	
Dwelling time at the platform	0.5	min	
Travel time between satellites (same apron)	1	min	
TTS average speed between aprons (+25%) T2&T5	7.3	m/s	>> 26.25 km/h
TTS average speed between aprons (+50%) T6	8.8	m/s	
Airside coach			
Waiting time (worst case scenario)	10	min	
Boarding	2	min	
Deboarding	1	min	
Average speed (airside roads)	7.2	km/h	>> 25.8kph
Average speed (tunnels)	10.7	km/h	>> 38.6kph
Boarding Card Presentation.			
Boarding Card Queue	1	min	
Boarding Card Process	0.1	min	
Security Screening			]
Security Screening queue	5	min	
Security Screening process	2.0	min	

#### **3R NW PASSENGERS**

T2 - T5 (Concourse A - Concourse H via Cor	ncourse C)	Time (s)	Time (min)
Disembarking		360	6.0
Arrival Gate to T2C TTS Platform (walking)	230 m	230	3.8
Arrival Gate to T2C TTS Platform (escalator)	3 lev	rels 150	2.5
TTS Wait		120	2.0
TTS Doors opening		5	0.1
TTS Platform dwell		30	0.5
TTS Travel Conc A - Conc C + Platform dwelling	2 pie	ers 180	3.0
TTS Travel between Conc C -Conc D + Platform dwelling	1000 m	167	2.8
TTS Travel between Conc D - Conc E + Platform dwelling	1 pie	ers 90	1.5
TTS Travel between Conc E - Conc F + Platform dwelling	650 m	119	2.0
TTS Travel Conc F - Conc H + Platform dwelling	2 pie	ers 150	2.5
TTS Doors opening		5	0.1
Conc H TTS Platform to Conc H Security (escalator)	4 lev	rels 200	3.3
Conc H TTS Platform to Conc H Security (walking)	200 m	200	3.3
Conc H Boarding Card Queue		60	1.0
Conc H Boarding Card Process		6	0.1
Conc H Security Screening queue		300	5.0
Conc H Security Screening process		120	2.0
Conc H Security to Conc H Departure Gate (escalator)	1 lev	rels 50	0.8
Conc H Security to Conc H Departure Gate (walking)	250 m	250	4.2
Buffer *		300	5.0
		TOTAL	51.5

\* Includes 5min buffer between pax reaching gate and chocks off.

#### 3R NW BAGS

T2 - T5 (Concourse A - Concourse H v	T2 - T5 (Concourse A - Concourse H via Concourse C)				
Unloading		420	7.0		
ULD to break-down area (t + d)	230 m	55	0.9		
ULD break-down		720	12.0		
Bag transfer from Conc A to Conc C (auto)	650 m	65	1.1		
Bag transfer from Conc C to Conc H (auto)	2900 m	290	4.8		
HBS and In-System Time		600	10.0		
Loading		120	2.0		
Buffer *		300	5.0		
		TOTAL	42.8		

\* Includes 5min buffer between bags being loaded and chocks off.

T2 - T6 (Conc A - Conc K via Conc C, Conc	H and C	onc J)	Time (s)	Time (min)
Disembarking			360	6.0
Arrival Gate to Conc A TTS Platform (walking)	230	m	230	3.8
Arrival Gate to Conc A TTS Platform (escalator)	3	levels	150	2.5
TTS Wait			120	2.0
TTS Doors opening			5	0.1
TTS Platform dwell			30	0.5
TTS Travel Conc A - Conc C + Platform dwelling	2	piers	180	3.0
TTS Travel between Conc C - Conc D + Platform dwelling	1000	m	167	2.8
TTS Travel between Conc D - Conc E + Platform dwelling	1	piers	90	1.5
TTS Travel between Conc E - Conc F + Platform dwelling	650	m	119	2.0
TTS Travel Conc F - Conc H + Platform dwelling	2	piers	180	3.0
TTS Travel between Conc H - Conc J + Platform dwelling	700	m	126	2.1
TTS Travel between Conc J - Conc K	1700	m	194	3.2
TTS Doors opening			5	0.1
Conc K TTS Platform to Conc K Security (escalator)	2	levels	100	1.7
Conc K TTS Platform to Conc K Security (walking)	50	) m	50	0.8
Conc K Boarding Card Queue			60	1.0
Conc K Boarding Card Process			6	0.1
Conc K Security Screening queue			300	5.0
Conc K Security Screening process			120	2.0
Conc K Security to Conc K Departure Gate (escalator)	1	levels	50	0.8
Conc K Security to Conc K Departure Gate (walking)	650	m	650	10.8
Buffer *			300	5.0
			TOTAL	59.9

T2 - T6 (Conc A - Conc K via Conc C,	Conc H and Conc J)	Time (s)	Time (min)
Unloading		420	7.0
ULD to break-down area (t + d)	230 m	55	0.9
ULD break-down		720	12.0
Bag transfer from Conc A to Conc C (auto)	650 m	65	1.1
Bag transfer from Conc C to Conc H (auto)	2900 m	290	4.8
Bag transfer from Conc H to Conc J (auto)	650 m	65	1.1
Bag transfer from Conc J to Conc K (auto)	1600 m	160	2.7
HBS and In-System Time		600	10.0
Loading		120	2.0
Buffer *		300	5.0
		TOTAL	46.6

#### Assumptions - Bags

- Assume all transfer bags are short connects and arrive and depart on pier-served stands - It is assumed that all core processors and satellites have adequate break-up, make-up and HBS facilites for short connecting bags

- Assumes all piers and processors have head of stand delivery facilities for short connect and late bags, except T4
   All inter-terminal bag transfers go via core processor to core processor
- All short-connect bags travel via automated systems, except around T4
- All short connect bags go through HBS at satellite of departure

Unloading		
Overall	7 min	
Cargo Doors open	3 min	
ULDs Off-Loaded	4 min	2 mins per ULD. Assumes transfer bags contained in first ones off
Break-Down		
Time taken to break-down ULD	12 min	
n-Process		
HBS and In-System Time	600 secs	
Delivery to Aircraft (tug and dolly)	4.2 m/s	Equates to 15kph
Delivery to Aircraft (automation)	10 m/s	Website states 10 or 14m/s
Make-Up		
Time taken to make-up ULD	30 secs	
Loading		
Overall	7.0 min	
ULDs loaded	4 min	2 mins per ULD. Assumes transfer bags contained in last ones on
Cargo Doors closed	3.0 min	

T5 - T6 (Conc F - Conc K via Conc H and	d Conc	J)	Time (s)	Time (min
Disembarking	T		360	6.0
Arrival Gate to Conc F TTS Platform (walking)	450	m	450	7.5
Arrival Gate to Conc F TTS Platform (escalator)	3	levels	150	2.5
TTS Wait			120	2.0
TTS Doors opening			5	0.1
TTS Platform dwell			30	0.5
TTS Travel between Conc F - Conc H + Platform dwelling	2	piers	180	3.0
TTS Travel between Conc H - Conc J + Platform dwelling	700	m	126	2.1
TTS Travel between Conc J - Conc K	1700	m	194	3.2
TTS Doors opening			5	0.1
Conc K TTS Platform to Conc K Security (escalator)	2	levels	100	1.7
Conc K TTS Platform to Conc K Security (walking)	50	m	50	0.8
Conc K Boarding Card Queue			60	1.0
Conc K Boarding Card Process			6	0.1
Conc K Security Screening queue			300	5.0
Conc K Security Screening process			120	2.0
Conc K Security to Departure Gate (escalator)	1	levels	50	0.8
Conc K Security to Departure Gate (walking)	650	m	650	10.8
Buffer *			300	5.0
			TOTAL	54.3

T5 - T6 (Conc F - Conc K via Conc	T5 - T6 (Conc F - Conc K via Conc H and Conc J)					
Unloading		420	7.0			
ULD to break-down area (t + d)	450 m	107	1.8			
ULD break-down		720	12.0			
Bag transfer from Conc F to Conc H (auto)	750 m	75	1.3			
Bag transfer from Conc H to Conc J (auto)	850 m	85	1.4			
Bag transfer from Conc J to Conc K (auto)	1600 m	160	2.7			
HBS and In-System Time		600	10.0			
Loading		120	2.0			
Buffer *		300	5.0			
		TOTAL	43.1			



### 13 Refreshed north west masterplan: Terminal and apron sizing summary

#### Refreshed north west masterplan terminal and apron sizing - 3R MAX Schedule

#### Terminal size limits (pax)

T4	Existing			
Total Size (No. of bays)	Min Max*			
Departures Hourly Capacity	1650	2350		
Arrivals Hourly Capacity	1800	2500		

Peak between minimum and maximum values Peak above maximum value

Peak below the minimum value

\* Maximum limit is the upper referral value as in "ACL LHR Start of Season Report - Winter 2012"

ТБ	Existing		Expanded Terminal Building								
15	Existing	ng							Max	Size	
Total Size (No. of bays)	21* **	2	27	2	29	3	0	3	81	3	2
Total Size (No. of Days)	21	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max*
Departures Hourly Capacity	5700	6800	7800	7200	8300	7500	8600	7700	8900	8000	10100
Arrivals Hourly Capacity	4500	6000	9500	6500	11500	7000	12500	7000	13500	7500	14500
* Manimum limitia dEO/ of minimum					1. 1	.1	1 . 1 . )				

Maximum limit is +15% of minimum as it considers potential technology advancements (e.g. check-in, security, etc.)

\*\* A 10% discomfort factor is added to the maximum departures value as the departures peak exceeds capacity for less than 1h.

In case the peak exceeds capacity for more than 1 hour, the discomfort factor would be 5%.

То	Existing		Expanded Terminal Building								
12	Existing								Max	Size	
Total Size (No. of bays)	21	3	5	4	5	5	5	60 (	01)*	67 (	O2)*
Total Size (No. of Days)	21	Min	Max	Min	Max	Min	Max	Min	Max**	Min	Max**
Departures Hourly Capacity	3350	5300	6100	7100	7200	8700	8900	10200	11700	10800	12400
Arrivals Hourly Capacity	3400	4900		7300	9700	9700	14600	10	700	120	600

\* OPTION 1 - Maximum T2 expansion is 60 bays; OPTION 2 - Maximum T2 expansion is 67 bays

\*\* Maximum limit is +15% of minimum as it considers potential technology advancements (e.g. check-in, security, etc.)

For arrivals the minimum capacity is assumed as the only reference value

Т6	sting			
Total Size (No. of bays)	35			
Total Size (No. of Days)	Min	Max		
Departures Hourly Capacity	5300	6100		
Arrivals Hourly Capacity	4900			

Apron size limits Stand frontage measurements from available CAD drawings

3R NW v3	Measured stand frontage	
A4	1768	
A5	5149	4630
A2	8517	9036
A6	5220	* T2 and T5 are assumed to share the bank of remote stands

#### MPPA per terminal

3R NW v3	MPPA Model Output*	MPPA Expected
T2	59.90	55
T4	8.90	10
T5	27.12	30
T6	34.28	35

\* For each terminal, daily passenger volumes are multiplied by a ratio of 345 to obtain the annual througput then reduced by 9.1% to relate it to a baseline scenario (130 MPPA)

	Model Output	
		(current run)
	Max Departures Hourly Peak	1,855
	Max Arrivals Hourly Peak	2,155
	Model Output	
		(current run)
	Max Departures Hourly Peak	5,603
	Max Arrivals Hourly Peak	3,860
	Model Output	
		(current run)
1		9,816
	Max Departures Hourly Peak	
2 1	Mary Américala Llaumh, Daala	9,153
2	Max Arrivals Hourly Peak	
	Model Output	
		(current run)
	Max Departures Hourly Peak	5,633
	Max Arrivals Hourly Peak	5,851
	Model Output	
		(current run)
	tand Frontage Demand	1,286
	tand Frontage Demand	4,630
	tand Frontage Demand	9,084
- Si	tand Frontage Demand	4,425

Model Output	
	(current run)
Max Departures Hourly Peak	
Max Arrivals Hourly Peak	2,155
	_,
Model Output	
	(current run)
Max Departures Hourly Peak	,
Max Arrivals Hourly Peak	
Model Output	
	(current run)
O1 Max Departures Hourly Peak	9,816
02	
O1 Max Arrivals Hourly Peak	9,153
02	
Model Output	
	(current run)
Max Departures Hourly Peak	5,633
Max Arrivals Hourly Peak	5,851
Model Output	
A4 - Stand Frontage Demand	(current run) 1,286
A5 - Stand Frontage Demand	4,630
A2 - Stand Frontage Demand	9,084
A6 - Stand Frontage Demand	4,425
	4,420

Max De	parture
Max	Arriva

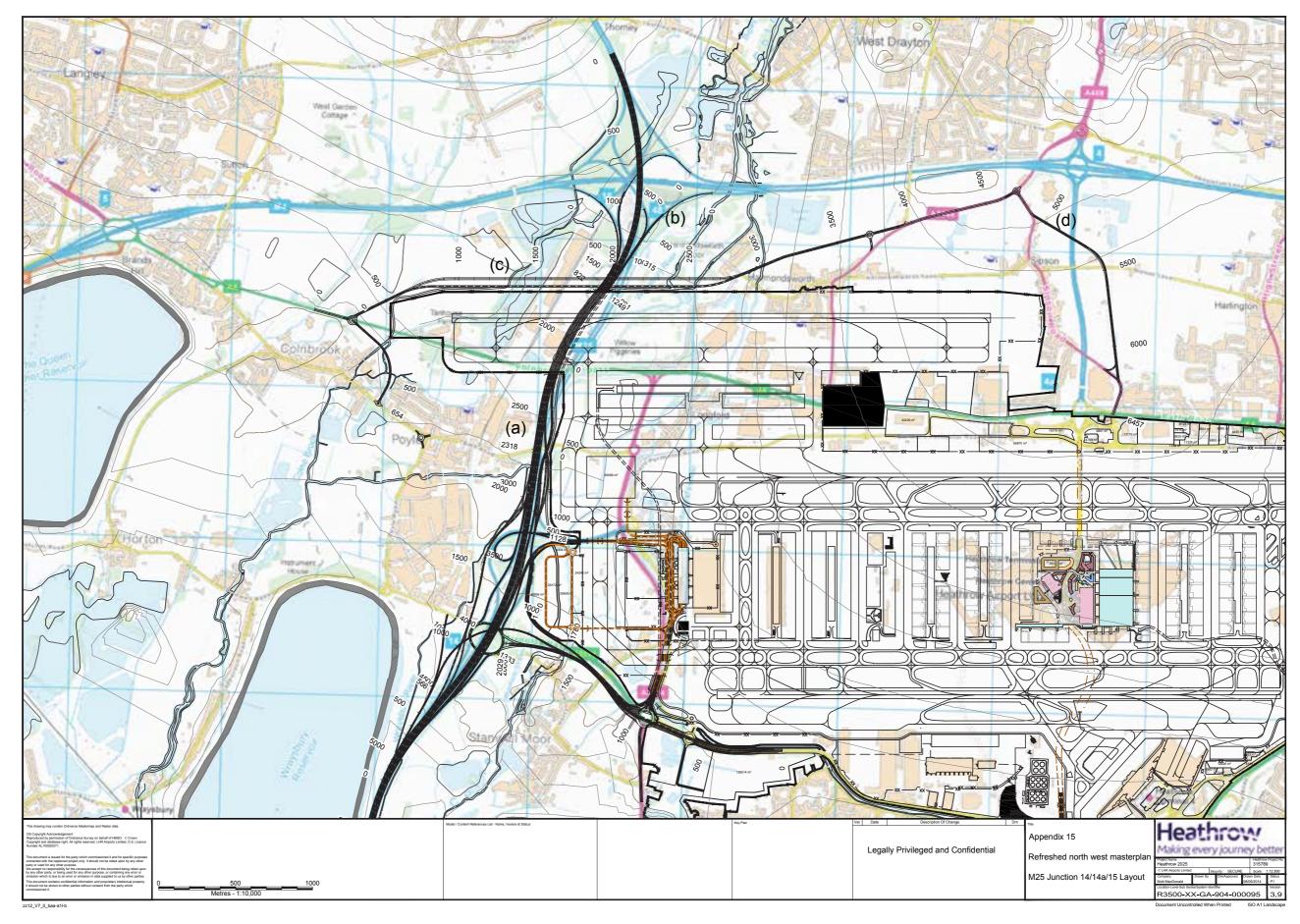
	Model Output	
		(current run)
	Max Departures Hourly Peak	1,855
	Max Arrivals Hourly Peak	2,155
	Model Output	
		(current run)
	Max Departures Hourly Peak	5,603
	Max Arrivals Hourly Peak	3,860
	Model Output	
		(current run)
01	Max Departures Hourly Peak	9,816
02 01	max Departaree fromy Four	9,153
02	Max Arrivals Hourly Peak	9,100
	Model Output	
		(current run)
	Max Departures Hourly Peak	5,633
	Max Arrivals Hourly Peak	5,851
	Model Output	
		(current run)
	d Frontage Demand	1,286
A5 - Stan	d Frontage Demand	4,630
	d Frontage Demand	9,084
A6 - Stan	d Frontage Demand emand frontage includes +10% adde	4,425

\* Stand demand frontage includes +10% added to the baseline (lubrication) and +5% (equipment)

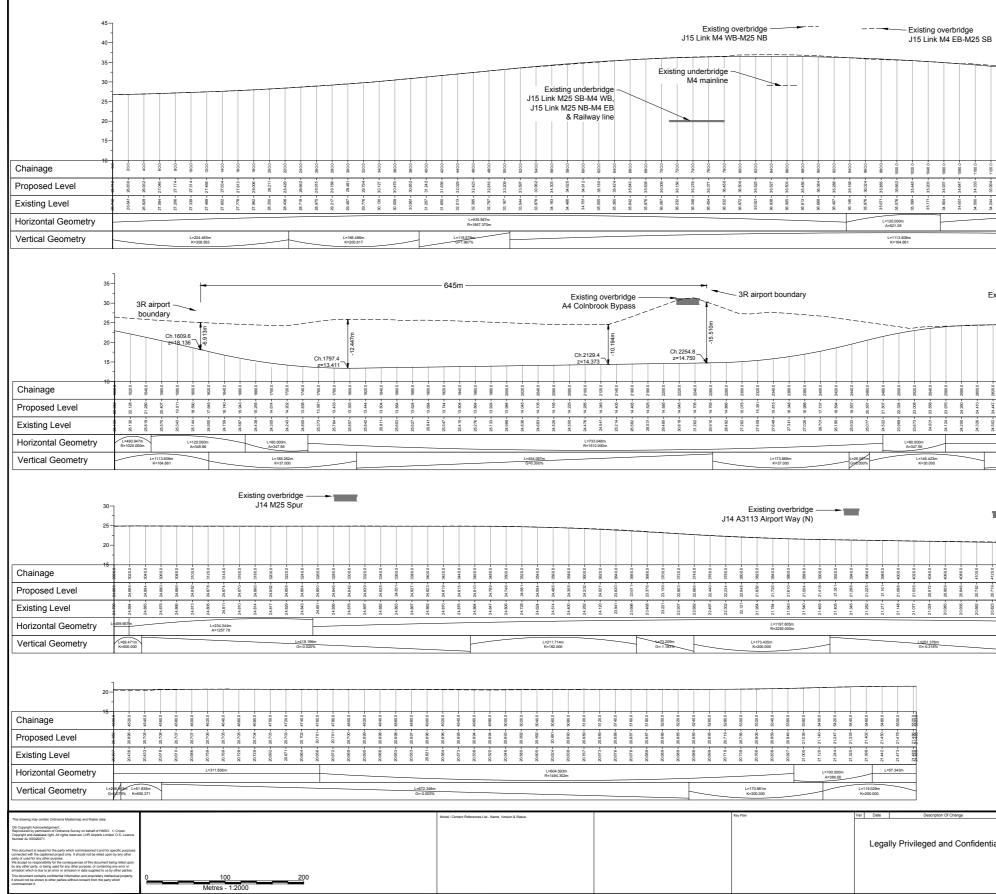
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#### **14 Cost Plan Summary**

	7,000,000
Contact Stands to satellites	127,000,000
Remote Stands	102,000,000
Airside Roads & Tunnels	429,000,000
Balancing Ponds	168,000,000
Land Use Plan	125,000,000
Fuel Farms	136,000,000
Control Tower	102,000,000
Navigational Equipment / Lighting	64,000,000
Airfield Noise Mitigation	93,000,000
Site Security Fence	7,000,000
Control Posts	18,000,000
Landside Infrastructure	1,112,000,000
Car Parking	645,000,000
Energy and Infrastructure	120,000,000
Utilities	222,000,000
Landside connectivity systems	125,000,000
Development Process Costs	205,000,000
Consents	175,000,000
Operational Readiness	25,000,000
Aerodrome Manual	5,000,000
Grand Total	£15,592,000,000



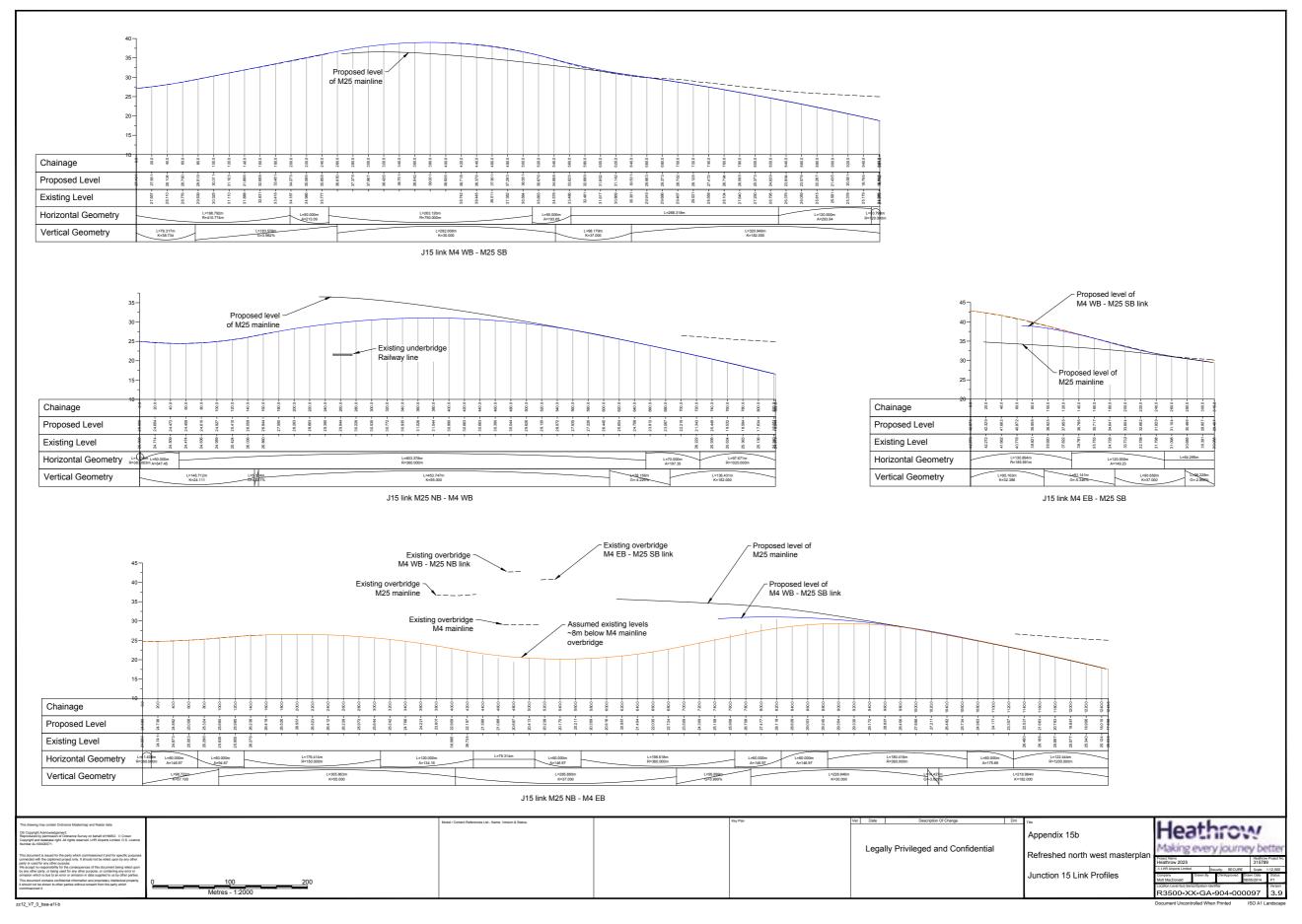
## 15 Refreshed north west masterplan: M25 Junction 14/14a/15 Layout



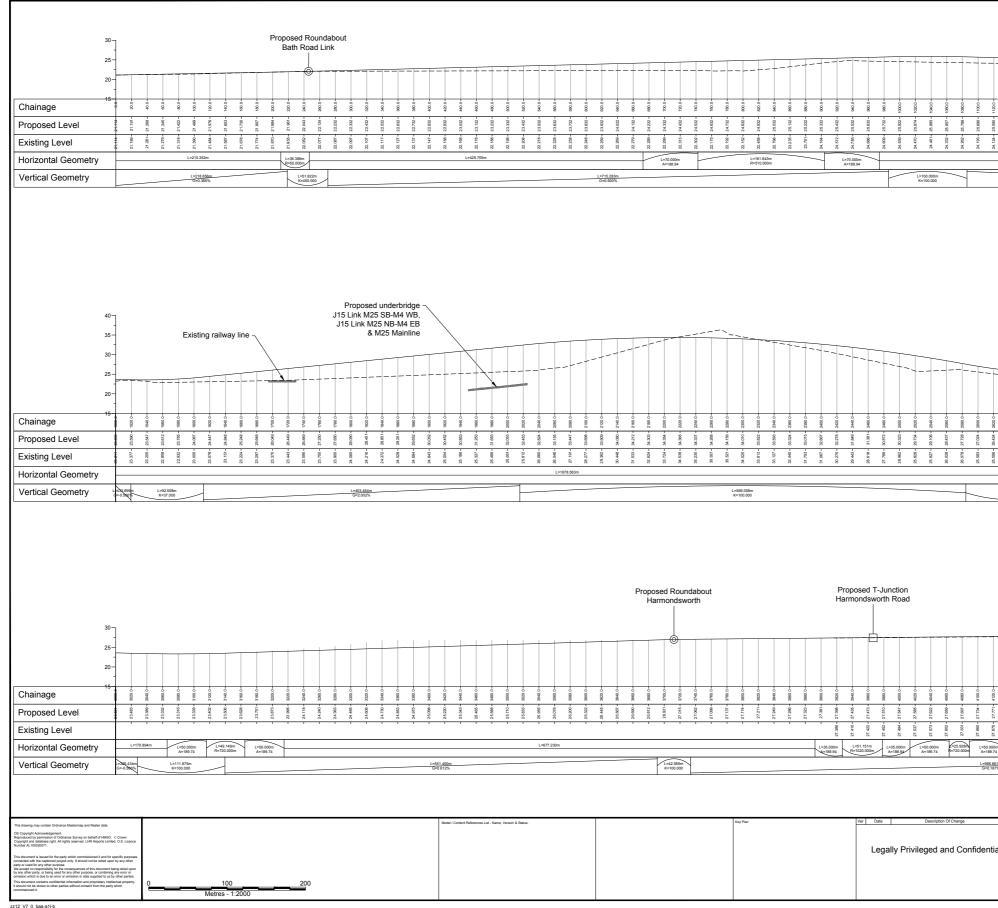
#### 15a Refreshed north west masterplan: M25 profile

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00000 - 144'42 - 200'00	24.611- 24.471- 2640.0-	24.545 - 24.485 - 2000.0 -	24.515 - 24.519 - 2680.0 -	24.483 - 24.543 - 2700.0 -	24.4.79 - 24.567 - 2720.0 -	24.464 - 24.591 - 2740.0	24450-24.614-2760.0-	0.0672 - 653 42 - 194 42	B 24.472- 24.662- 2800.0-	24.4.19 - 24.686 - 2620.0 -	24.447 - 24.710 - 2840.0 -	24.463 - 24.734 - 2860.0 -	24.455 - 24.758 - 2880.0 -	24.480 - 24.781 - 2800.0 -	24.536 - 24.805 - 2520.0 -	24.622 - 24.829 - 2940.0 -	24.734 - 24.853 - 2980.0 -	24.800 - 24.875 - 2880.0 -	24.760 24.886 3000.0
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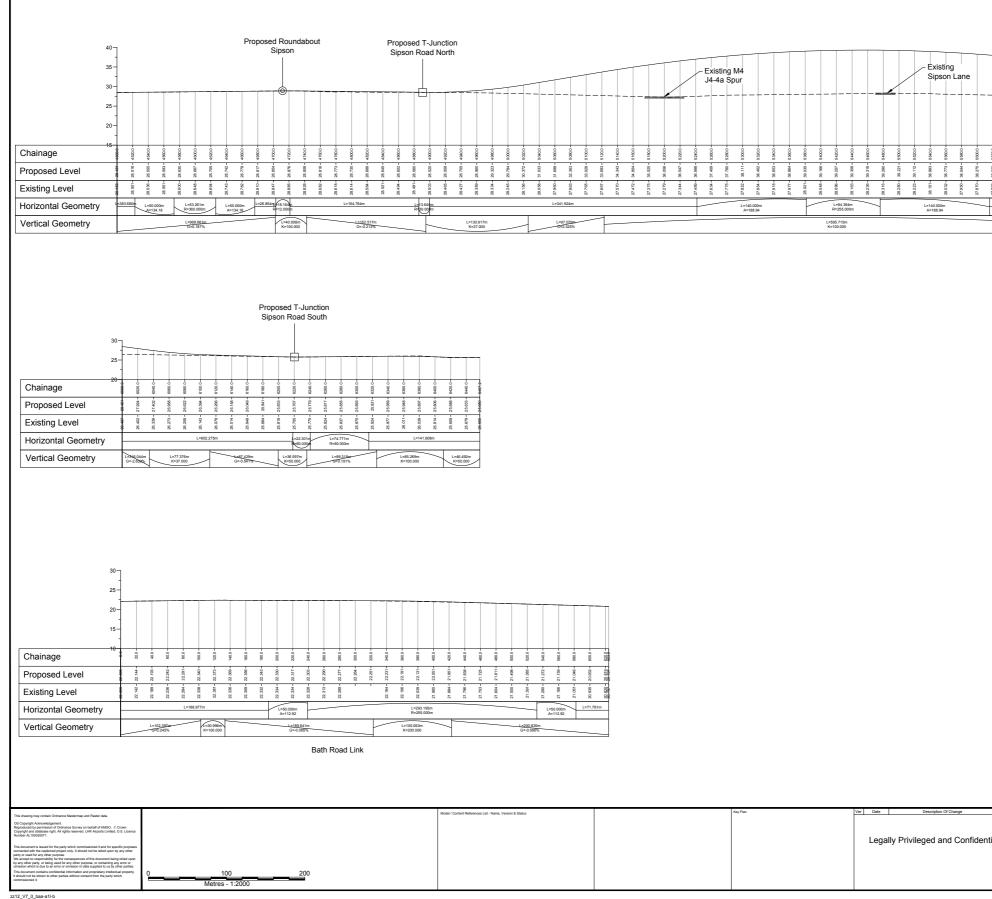


#### **15b** Refreshed north west masterplan: Junction **15** link profiles



### 15c Refreshed north west masterplan: A4 profile sheet 1

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24.124 - 25.590 -	24.055 - 25.490 -	3-26.390-	3- 25.200-	- 25.190 -	3-26.090-	9-24,990	- 24,890 -	- 24.790 -	1- 24,690 -	24.590 -	24.490 -	3-24,390-	- 24.280-	5-24.190-	5-24.080	3-23.990-	- 23.890-	3-23.790-	23.600
24.12	24.05	23.996-	23.916 -	23.847 -	23.778-	8 1678.563r	23.639	23.570-	23.601-	23.432	23.362-	23.203-	23.224-	23.155-	23.085 -	23.016-	22.947 -	22.878-	23.214
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25.089 - 26.424 - 2620.0-	25.931-	25.548 -	25.272 -	25.104 -	25.002 -	24.901-	24.800 -	24.698 -	24.597 -	24.496 -	24.394 -	24.203 -	24.192 -	24.091-	23.969 -	23.888 -	23.787 -	23.685 -	23.694
25.089-	24.913 -	25.010 -	24.985-	24.954 -	24.890 -	24.727 -	24.549 -	24.365 -	24.176-	23.963-	23.768 -	23.692 -	'				'		
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27.771-	27,809 - 4140.0-	27.846 - 4	27.883 - 4	27.921- 4	27.958 - 4	27.995 - 4	28.033-4	28.070 - 4	28.107 - 4	28.145 - 4	28.182 - 4	28219-4	28.257 - 4	28.294 - 4	28.331- 4	28.309 - 4	28.406 - 4	28.443 - 4480.0-	28.491
F B 27.675 - 27.771 - 4120.0-	27.712-	27.757 - 3	27.787 - 2	27.817 -	27.856 - 2	27.901-	27.945 - 2	28.002-	28.042 -	28.069-1	28.115-2	28.168-1	28.203-1	28.233-	28.285	28.330-1	28.375-	28.417 - 2	20.453
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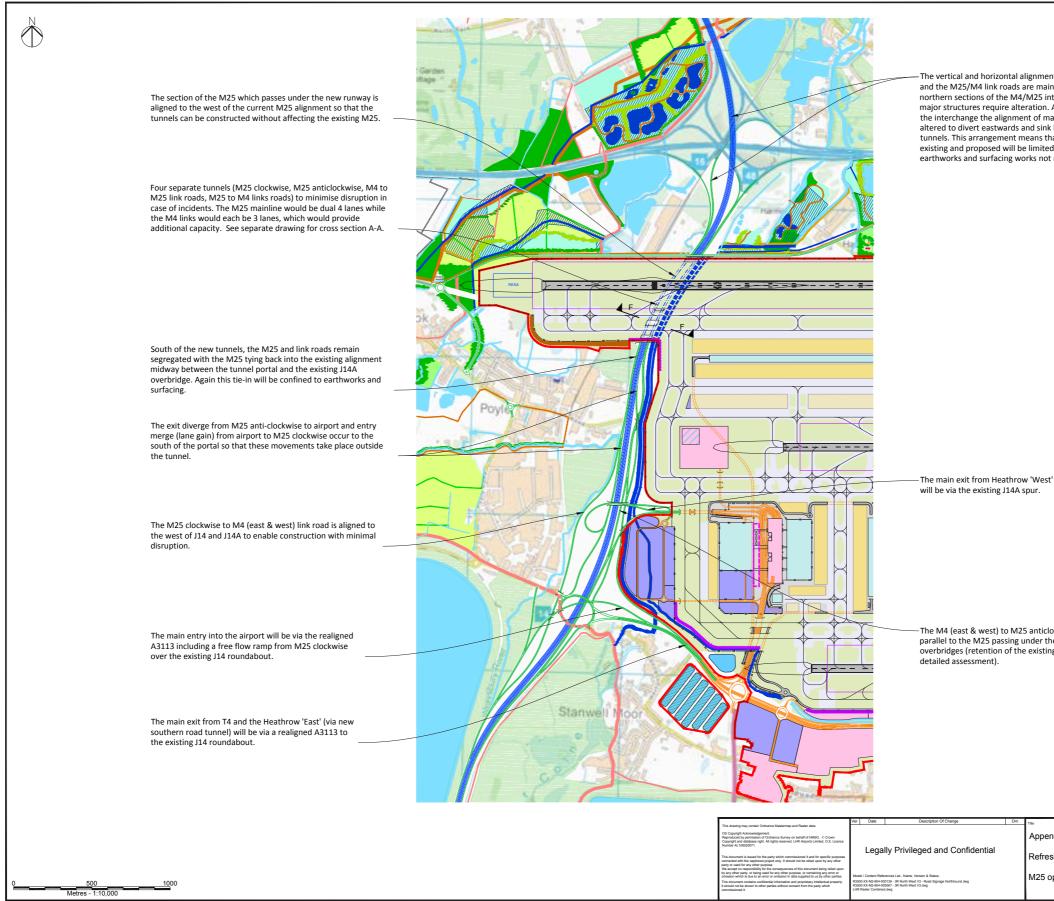


### **15d Refreshed north west masterplan: A4 profile sheet 2**

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	26.921-	32.136-	580.0-	
	26.856	31.610-	5880.0-	
	26.791-	31.083-	- 6900.0-	
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		A4 Profile Sheet 2	Company Mott MacDonald Location-Level-Sub Seri	Drawn By	Chk/Approved	Drawn Date 08/05/2014	Status P1 Version
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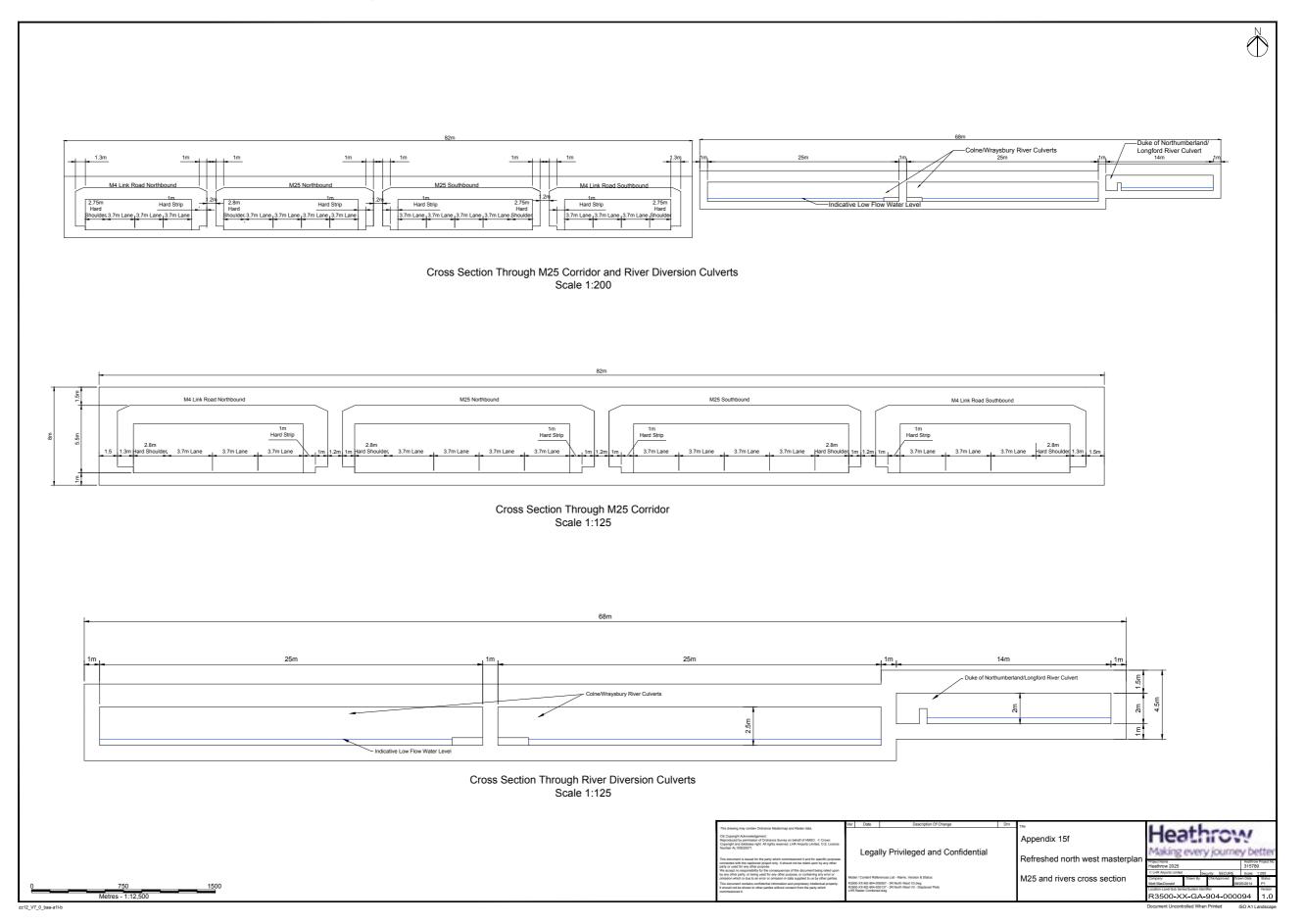
© Heathrow Airport Limited 2014

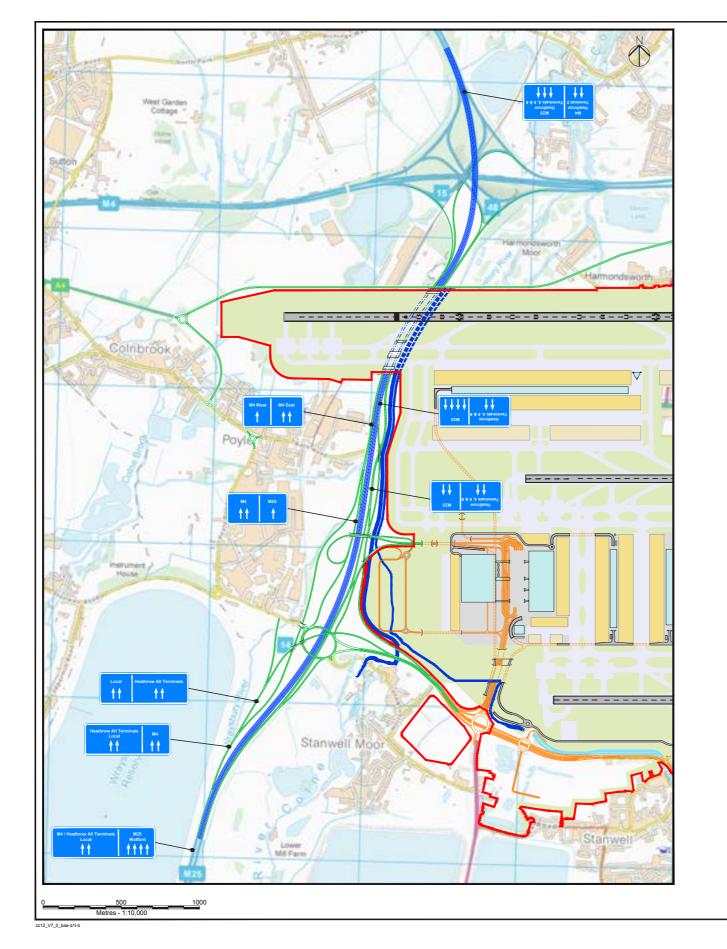
The vertical and horizontal alignments of the M25 mainline and the M25/M4 link roads are maintained through the northern sections of the M4/M25 interchange so that no major structures require alteration. At the southern end of the interchange the alignment of mainline and links are altered to divert eastwards and sink lower into the new tunnels. This arrangement means that the tie-in between existing and proposed will be limited to relatively minor earthworks and surfacing works not major structures.

The M4 (east & west) to M25 anticlockwise link road is aligned parallel to the M25 passing under the existing J14A and J14 overbridges (retention of the existing structures is subject to

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		n ten conce north webt masterplan	Project Name Heathrow 2025			Heathrow 31578	v Project No. 9	
			© LHR Airports Limited Si		Security: SECURE	Scale:	Scale: 1:10,000	
		M25 operating concept	Company Mott MacDonald	Drawn By	ChkiApproved	Drawn Date 08/05/2014	Status P1	
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			R3500-X	X-GA	-904-00	0093	3.9	
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### 15f Refreshed north west masterplan: M25 and rivers cross sections

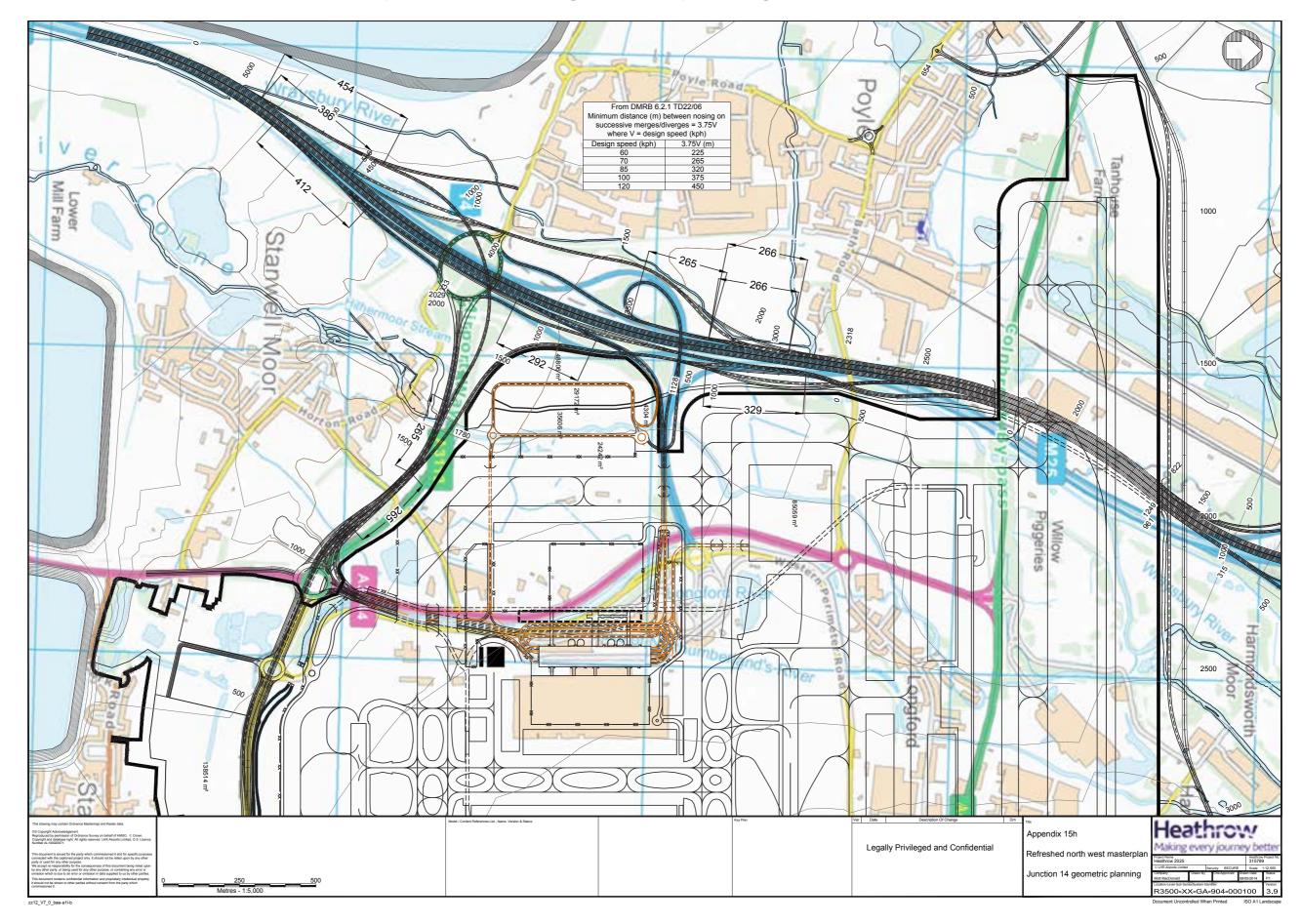




# 15g Refreshed north west masterplan: M25 signage proposals

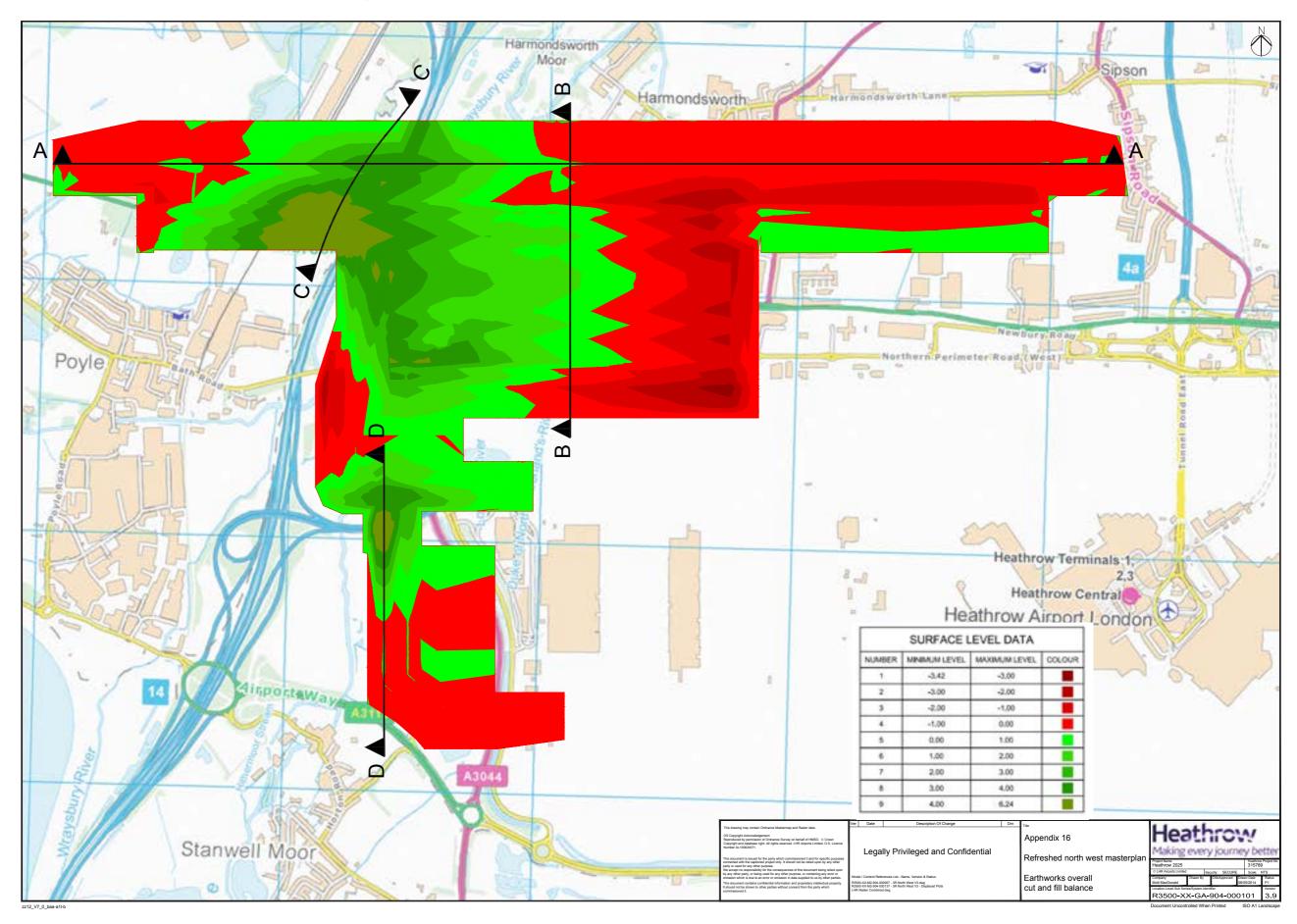
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This dawing may contain Orbitance Mattermap and Reater data. OS Copyright Actional degeneration of Orbitance Survey on behalf of HMSO, © Crown Copyright and database right: All rights reserved. LHR Aliports Limited, O.S. Licence Number AL-100020071.		Lega	lly Privileged and Confidentia
This document is issued for the party which commissioned it and for specific purposes connected with the captioned project only. It should not be relied upon by any other party or used for any other purpose. We accept no responsibility for the consequences of this document being relied upon by any other party, or being used for any other purpose, or containing any error or omission which is due to an error or omission in data supplied to us by other party.	Mod	el / Content Refe	rences List - Name, Version & Status:
This document contains confidential information and proprietary intellectual property. It should not be shown to other parties without consent from the party which commissioned it.	R35		0138 - 3R North West V3 - Road Signage Northbound.dwg 0067 - 3R North West V3.dwg 1.dwg

Dm	Та	Lloothcour
ial	Appendix 15g Refreshed north west masterplan	Making every journey better
	M25 signage proposals	Higher Name         Heathrow 2025           Heathrow 2025         315789           C URR Apports Limited         Security: SECURE         Societ: 1:10.000           Company         Usan By         USA/SAPOred         Disan Dia           Moft Mechanid         Disan By         DisAn Dia         DisAn Dia           Moft Mechanid         Disan By         DisAn Dia         DisAn Dia           Moft Mechanid         Version         DisAn Dia         DisAn Dia
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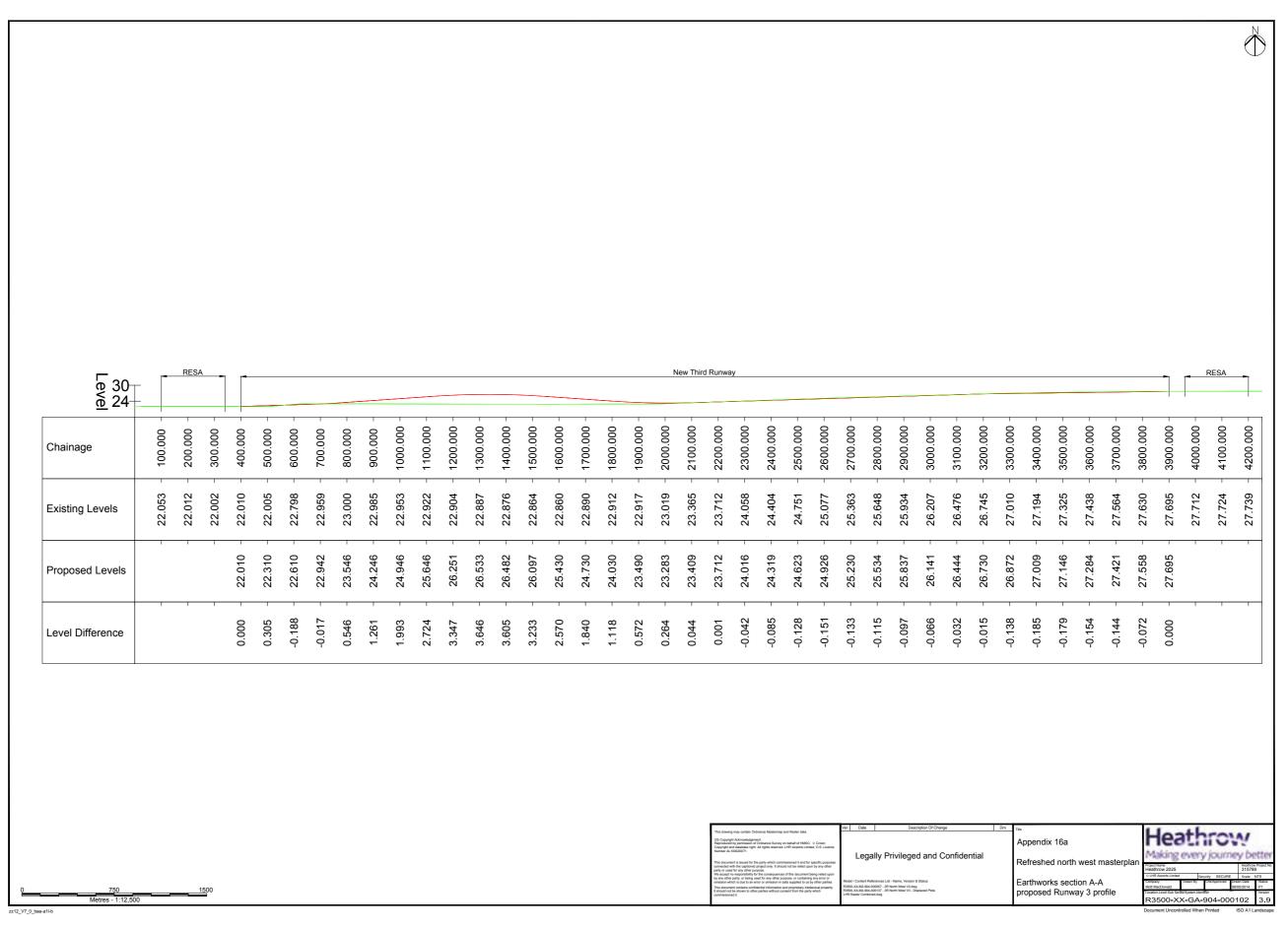
## 15h Refreshed north west masterplan: Junction 14 geometric planning

Volume 3 - Taking Britain further – A3 Appendices Page 19

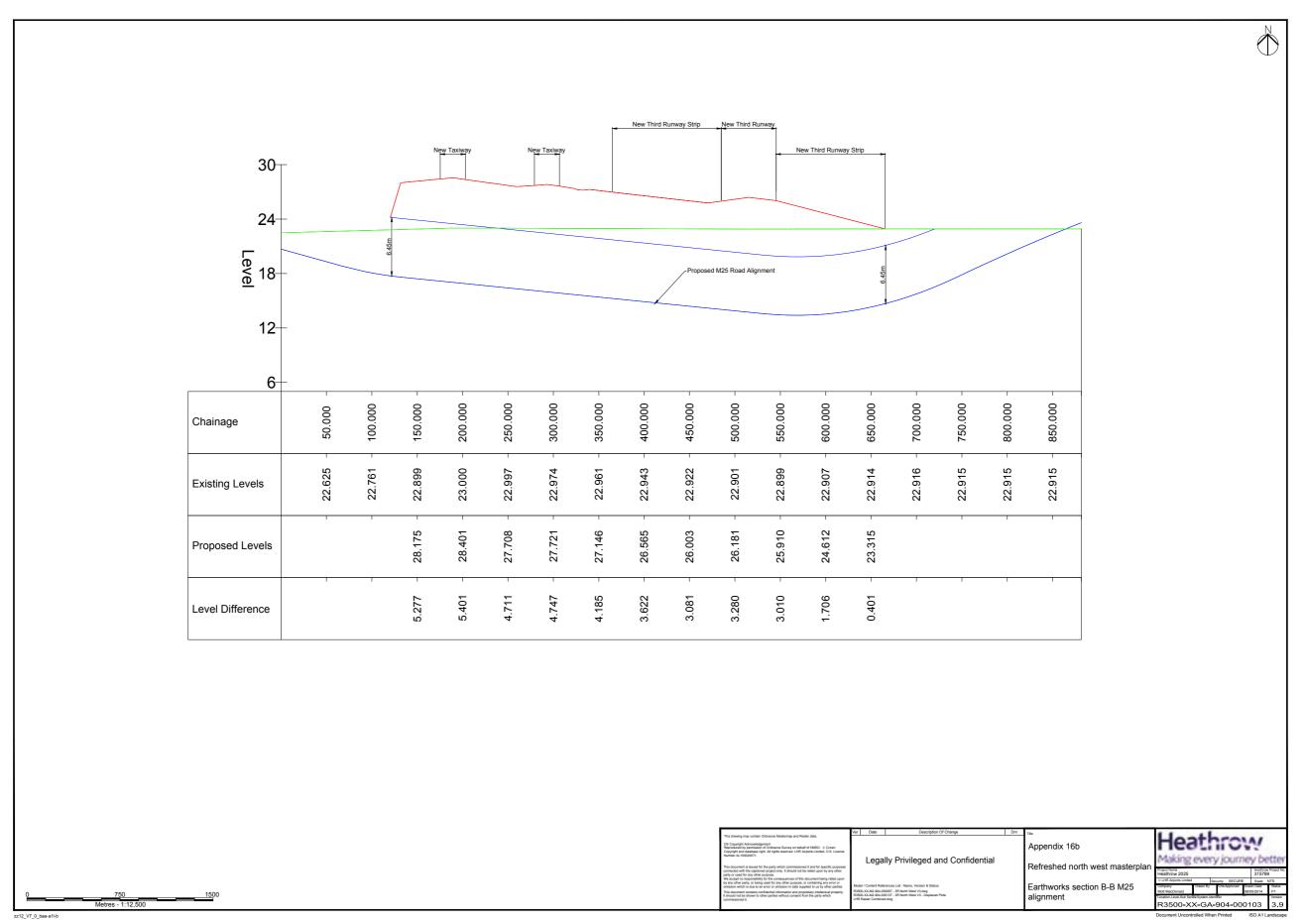


### 16 Refreshed north west masterplan: Earthworks overall cut and fill balance

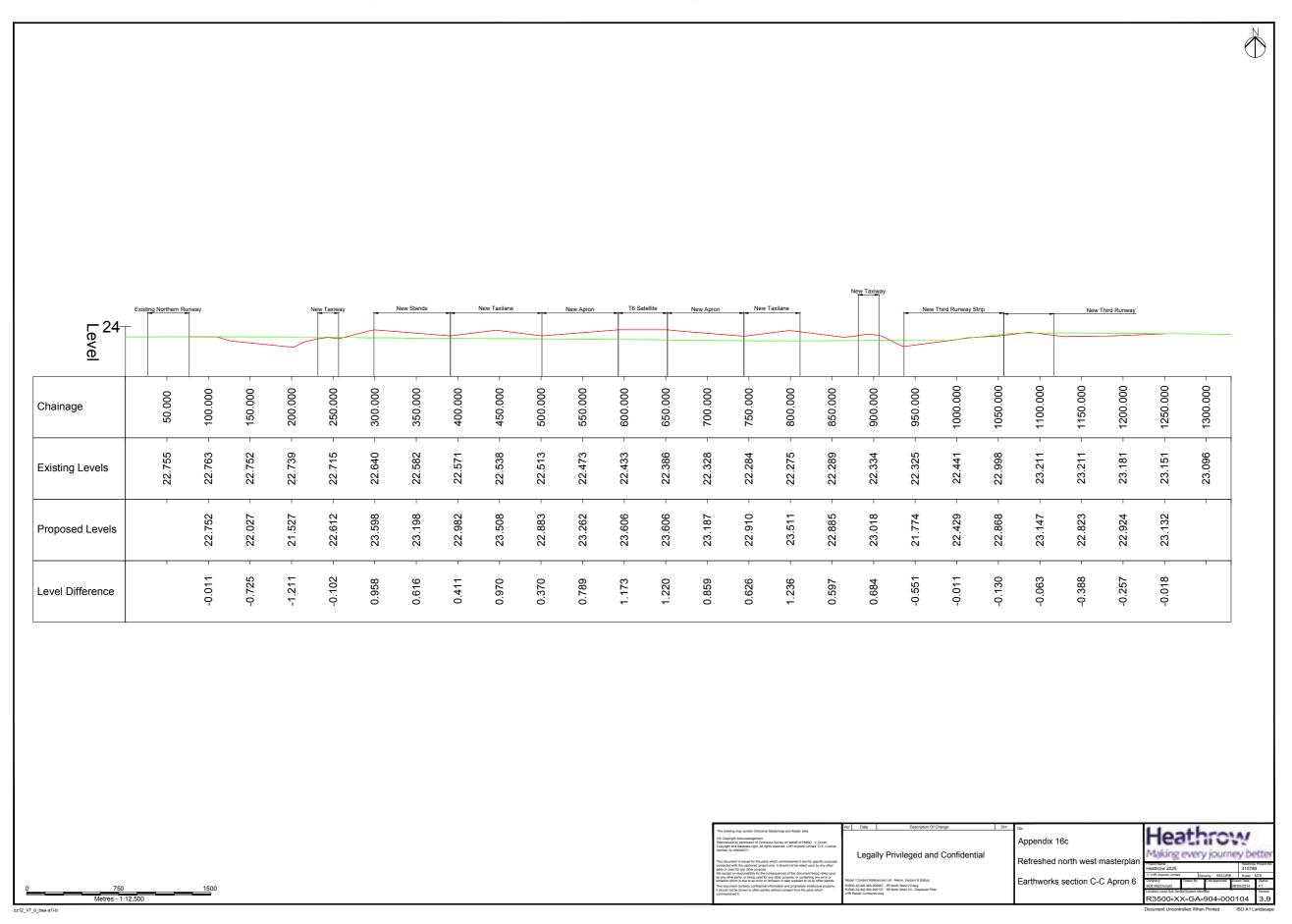
Volume 3 - Taking Britain further – A3 Appendices Page 20



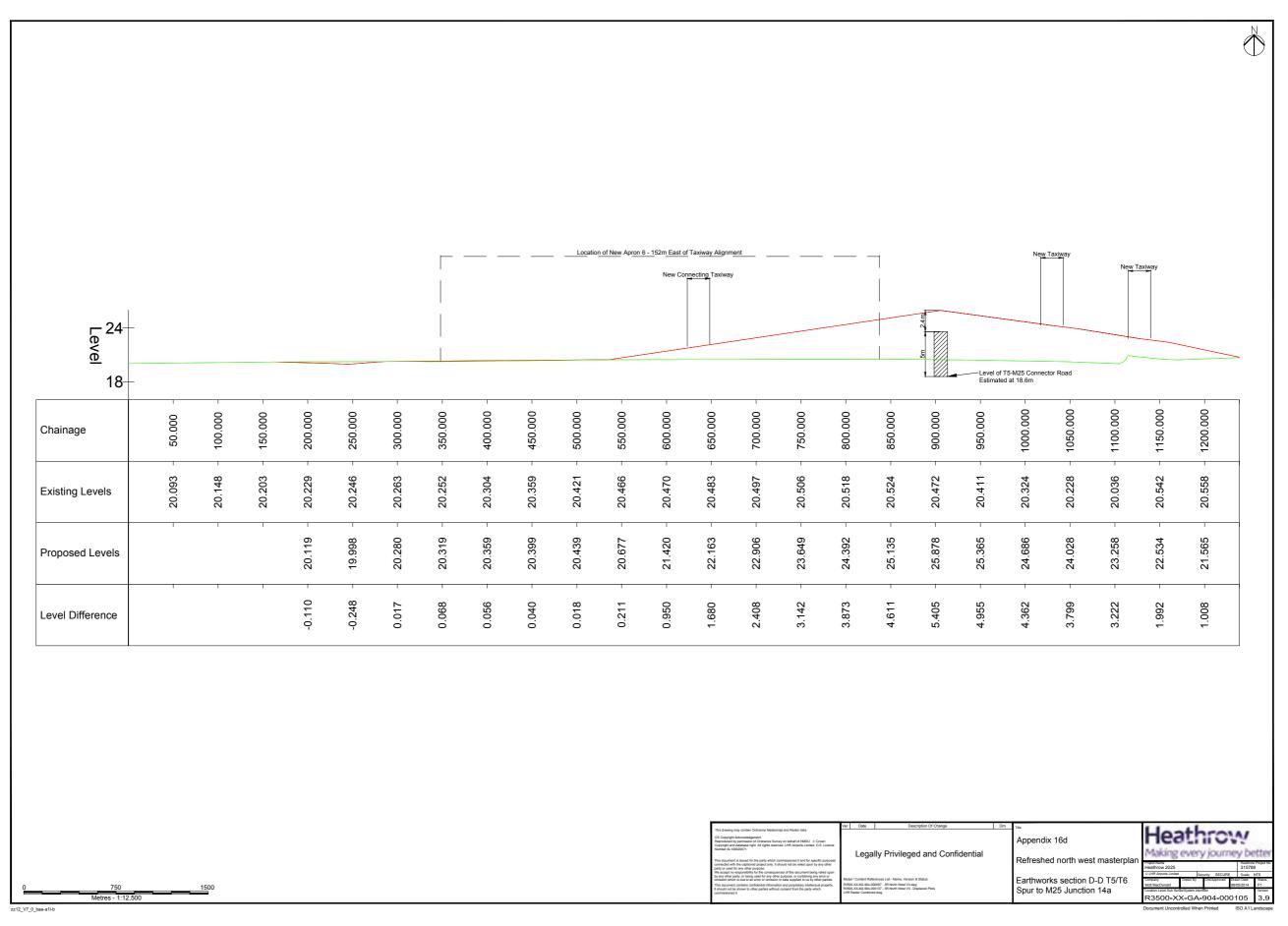
### 16a Refreshed north west masterplan: Earthworks section A-A proposed Runway 3 profile



### 16b Refreshed north west masterplan: Earthworks section B-B M25 alignment

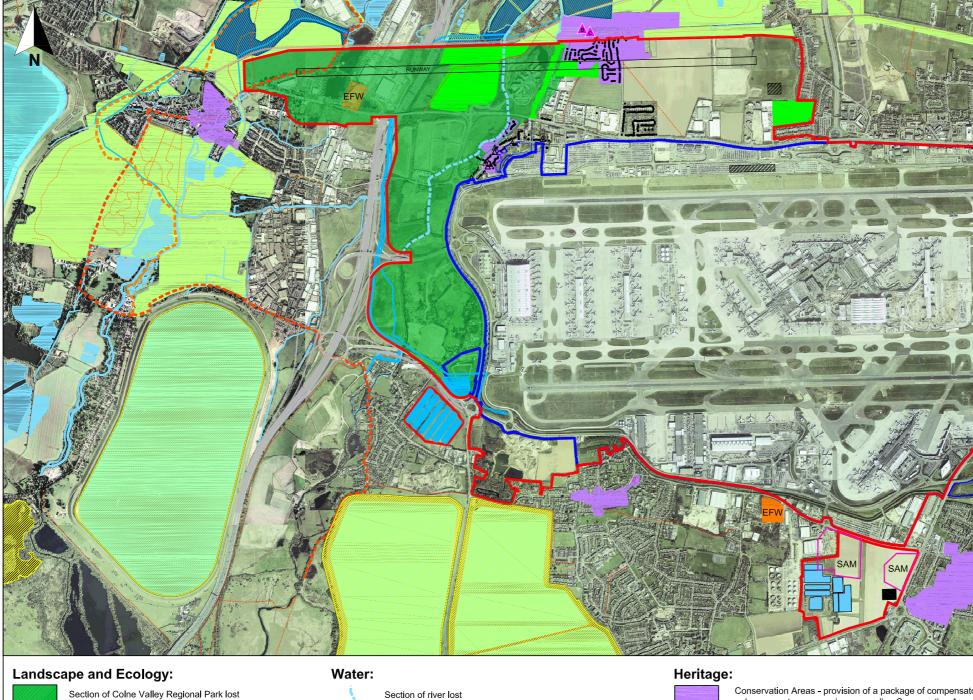


### 16c Refreshed north west masterplan: Earthworks section C-C Apron 6



### 16d Refreshed north west masterplan: Earthworks section D-D T5/T6 Spur to M25 Junction 14a

#### **17** Summary of key mitigation measures





Mitigation: Realignment of watercourses to move water more sustainably around the airport

Provision of compensatory flood storage to replace the floodplain storage lost through the development

New balancing ponds aiding drainage and glycol recovery 

#### **Resource Use:**

EFW

FF\

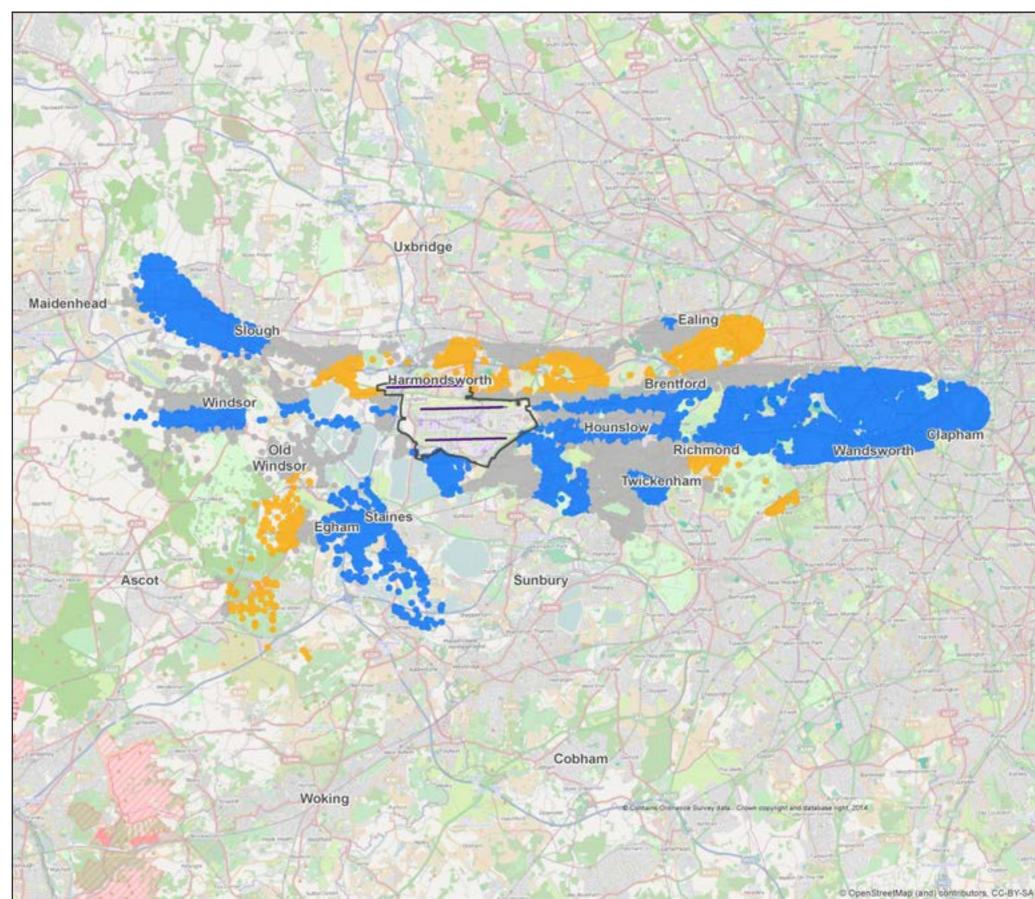
Loss of existing Energy from Waste Facility

Mitigation: Reprovision of Energy from Waste Facility

	Conservation Areas - provision of a package of compensator enhancement measures in surrounding Conservation Areas
<b>ä</b>	Listed Buildings to be lost
	Mitigation:
٨	Preservation of the Grade I Listed Great Barn
۵	Preservation of the Grade II* Listed St. Mary's Church (with t of moving the Great Barn to a suitable off-site location)
SAM	Scheduled Ancient Monuments
Property Loss:	

Properties to be lost

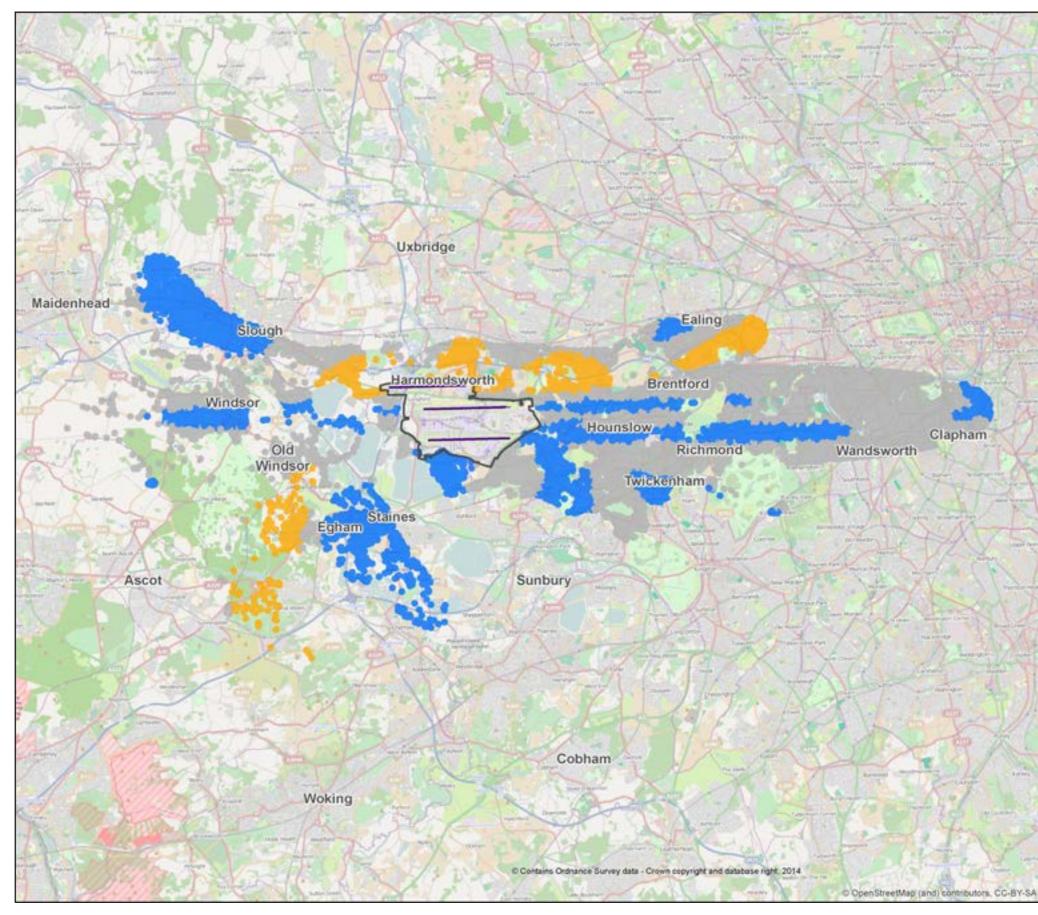




18 Minimise total people overflown - change in noise level using the summer LAeq, 16hr metric within the "area of interest" between 2011 and 2030

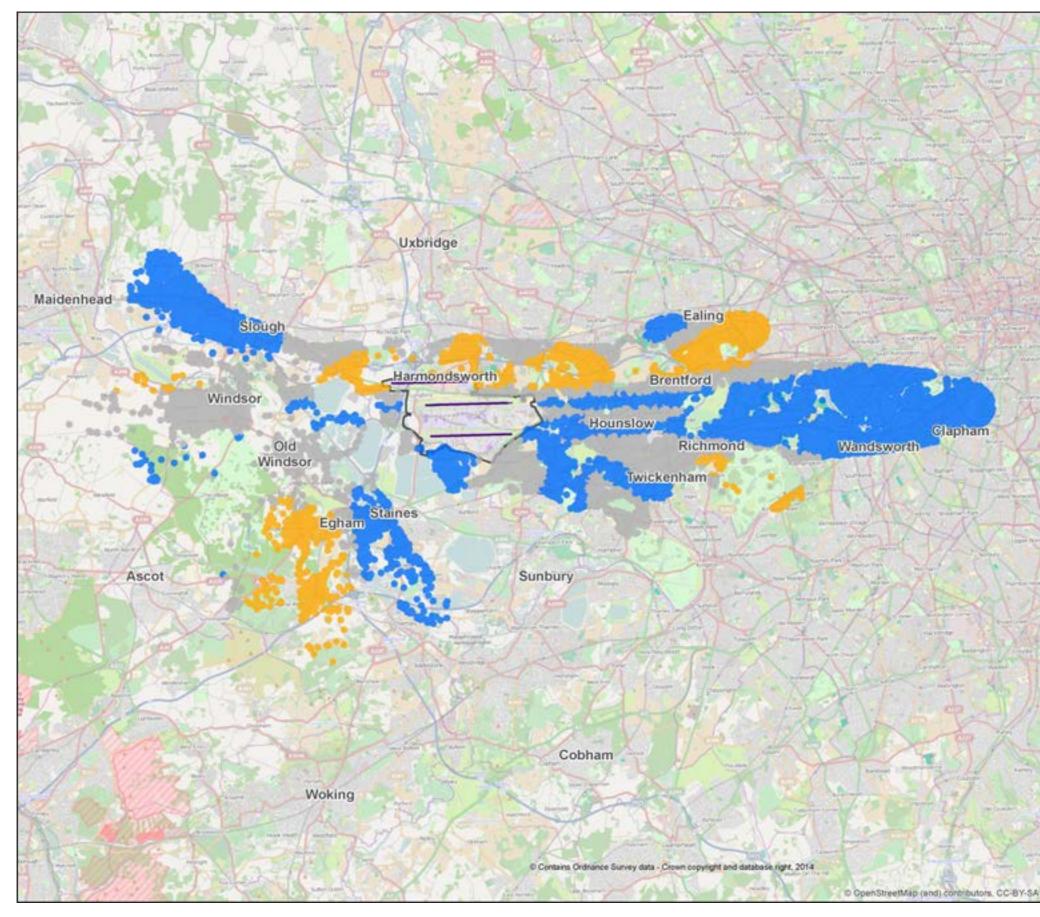


19 Minimise new people overflown - change in noise level using the summer LAeq, 16hr metric within the "area of interest" between 2011 and 2030

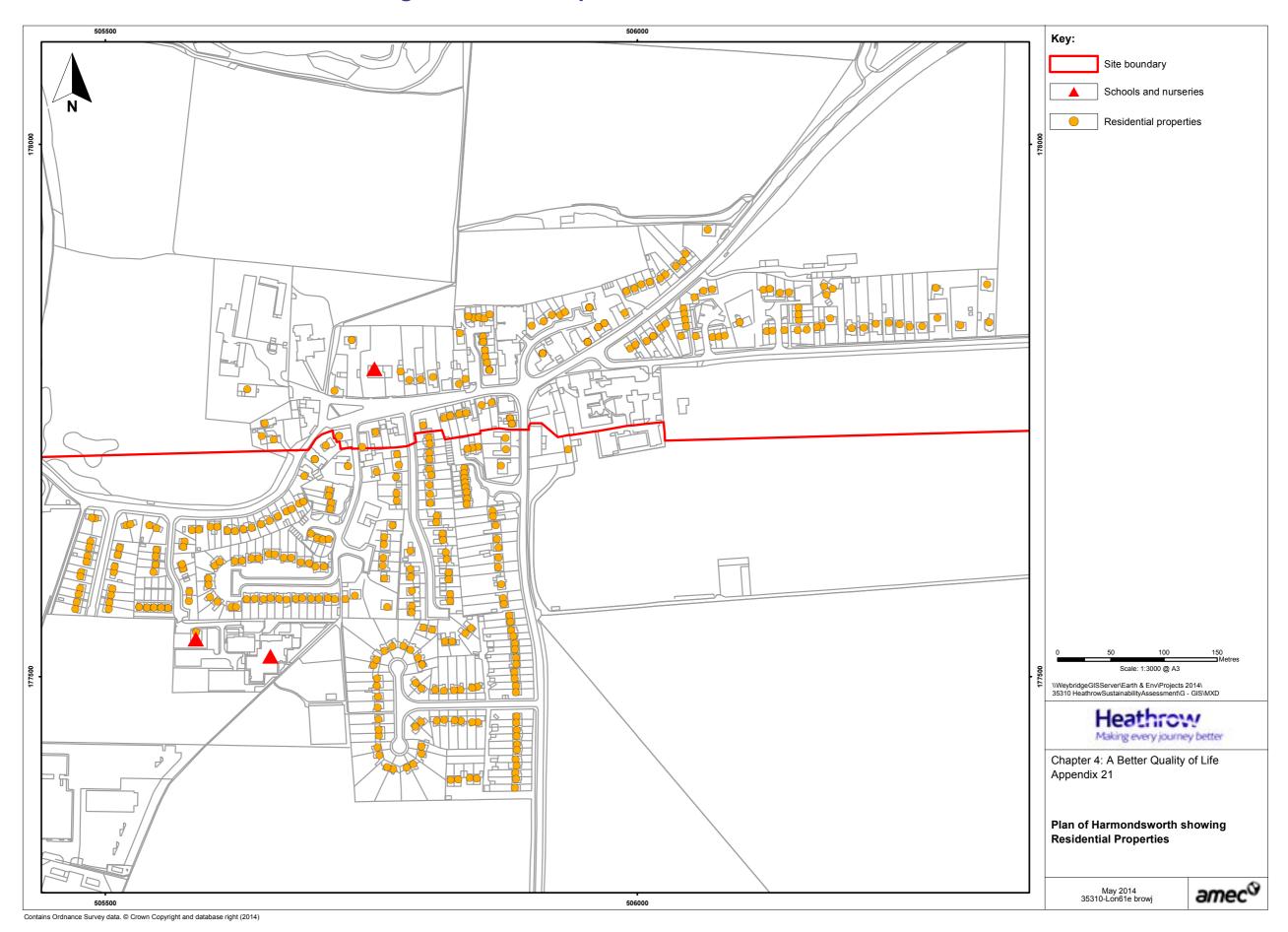




20 Maximise respite for those people overflown - change in noise level using the Summer LAeq, 16hr metric within the "area of interest" between 2011 and 2030

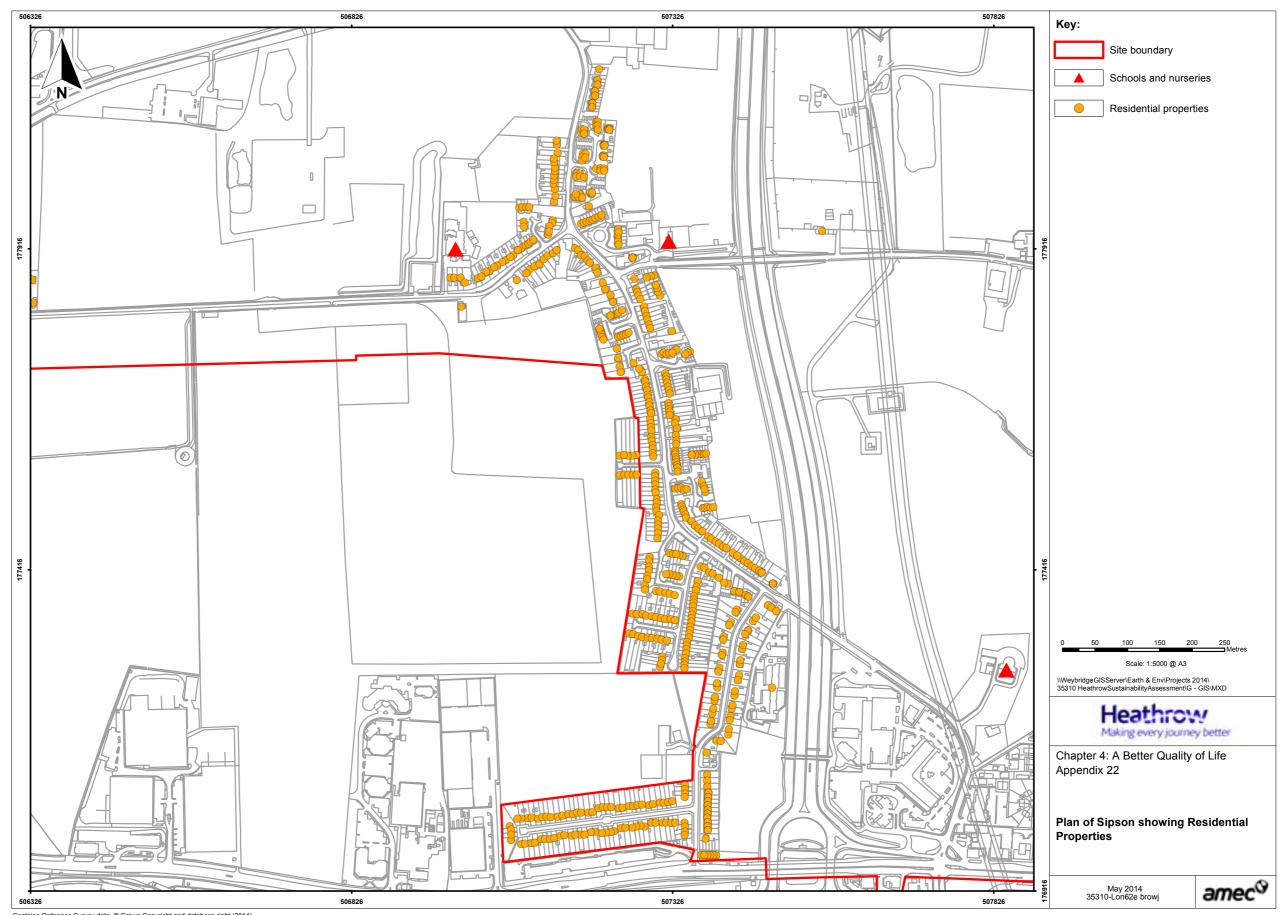






## 21 Plan of Harmondsworth showing Residential Properties

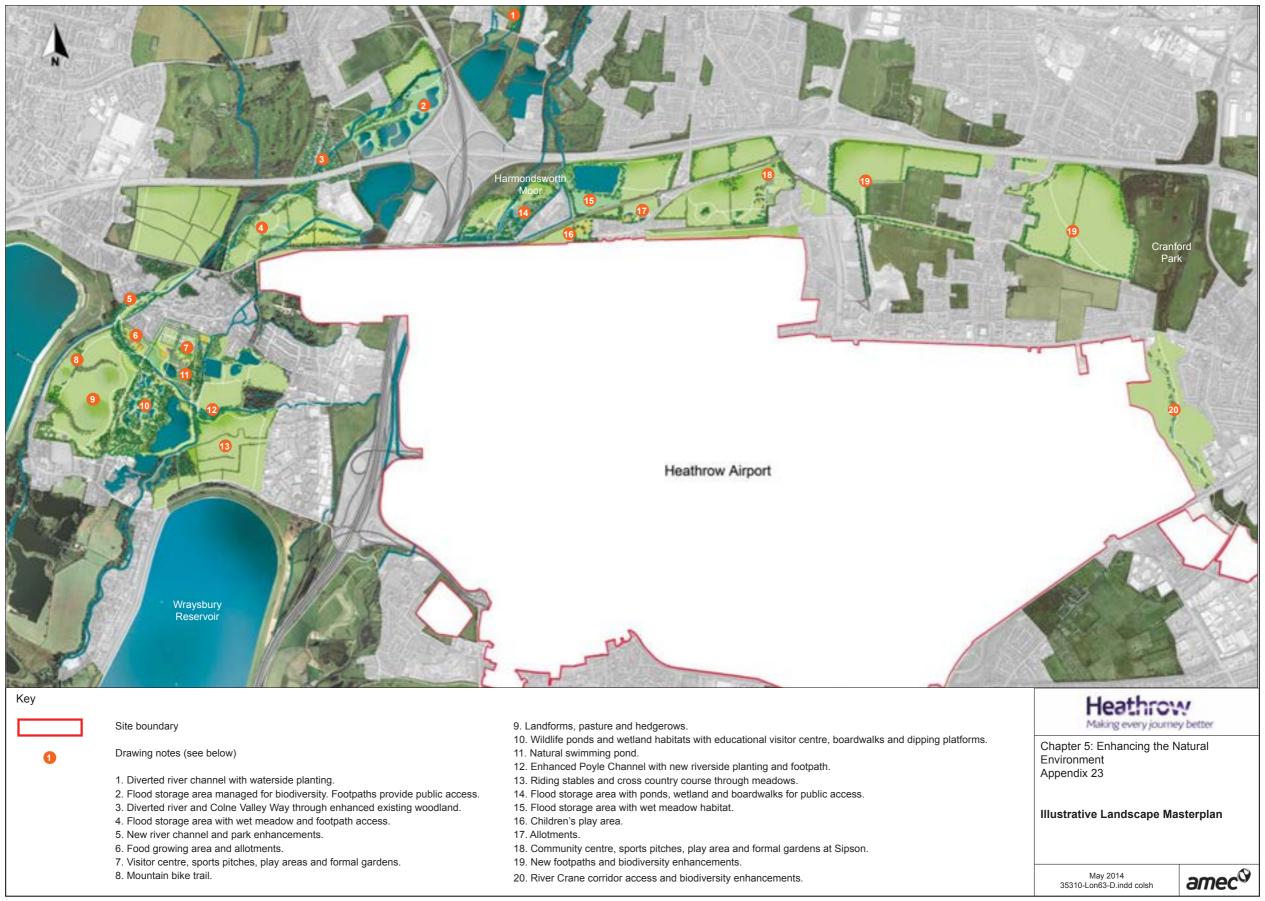
© Heathrow Airport Limited 2014



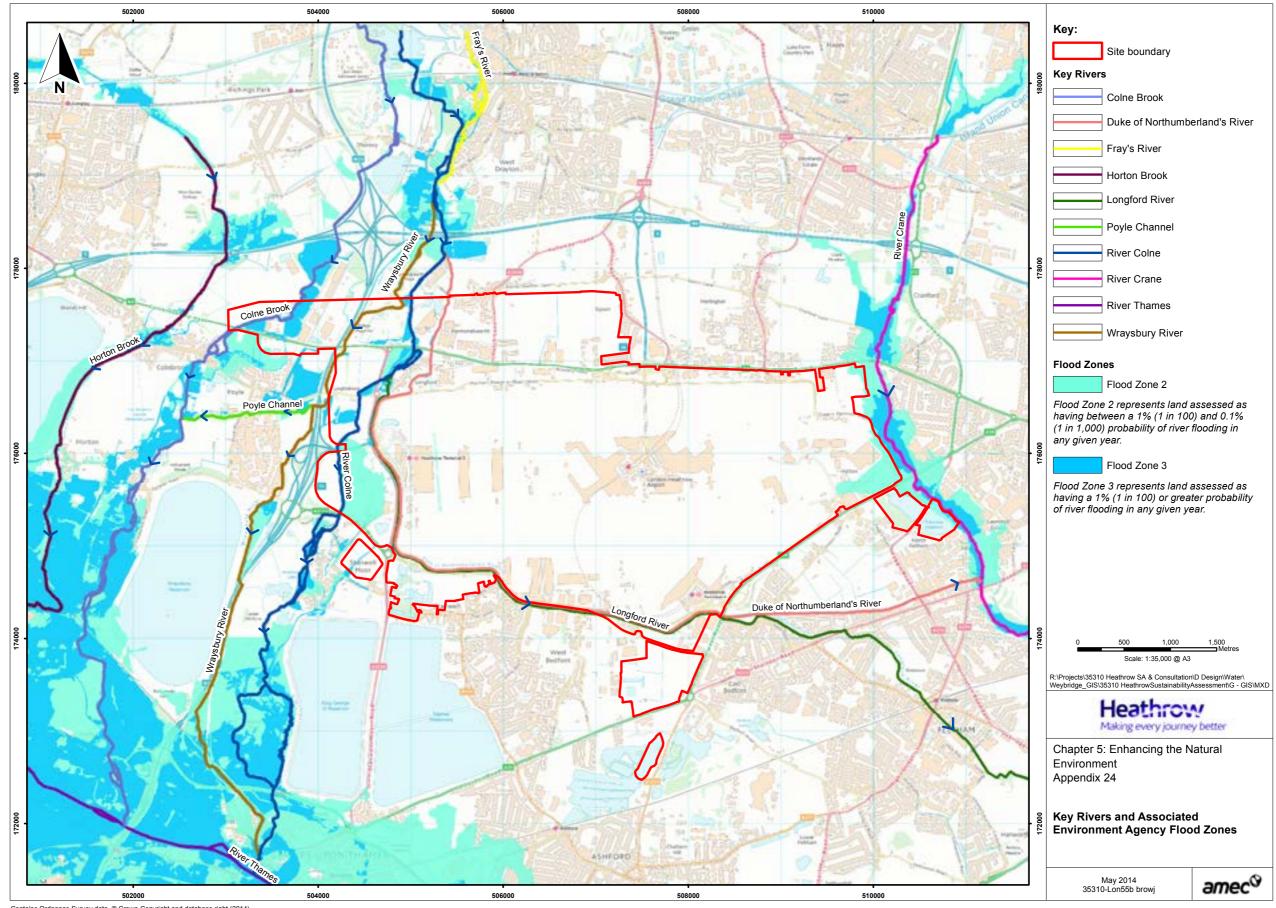
## 22 Plan of Sipson showing Residential Properties

Contains Ordnance Survey data. © Crown Copyright and database right (2014)

#### 23 Illustrative Landscape Masterplan



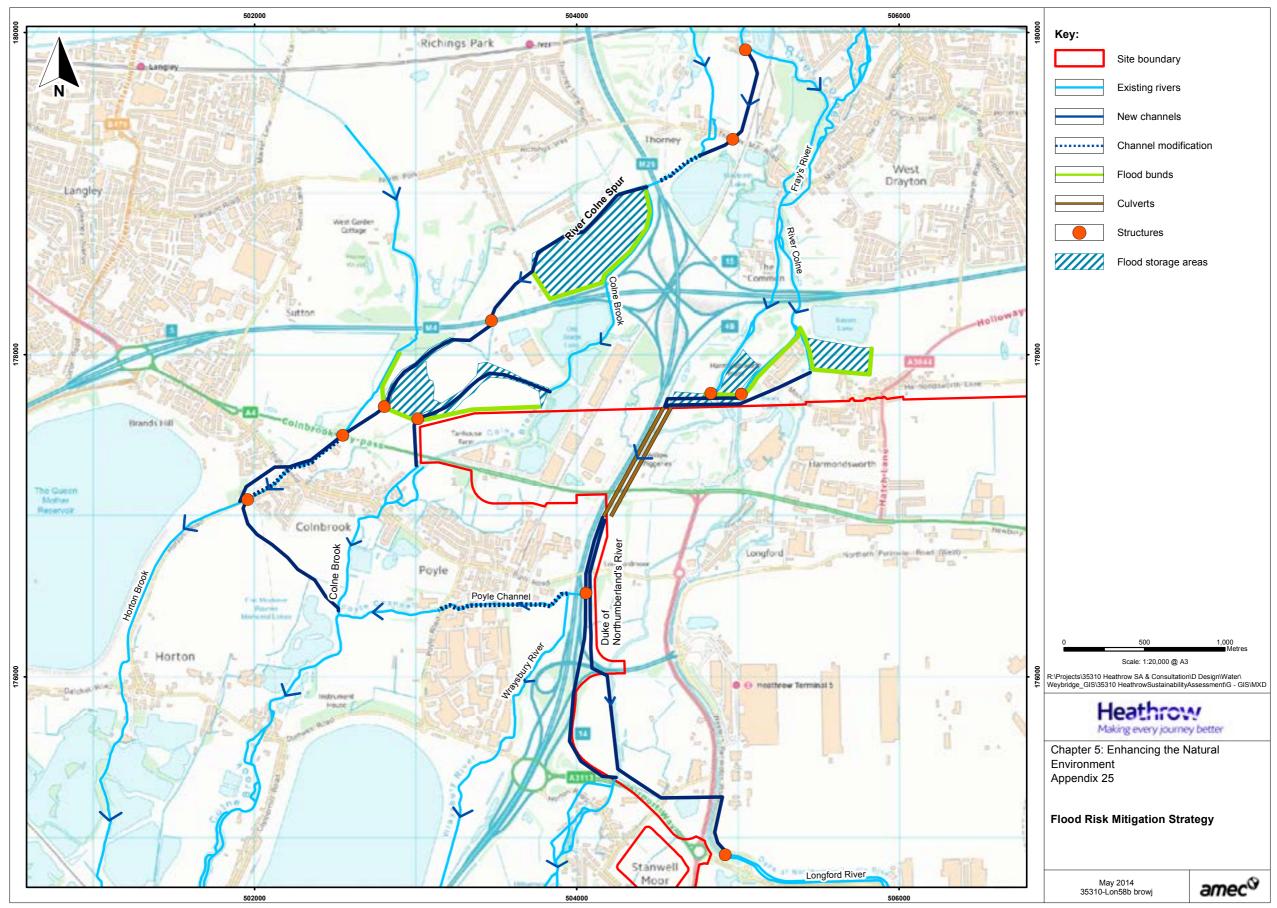
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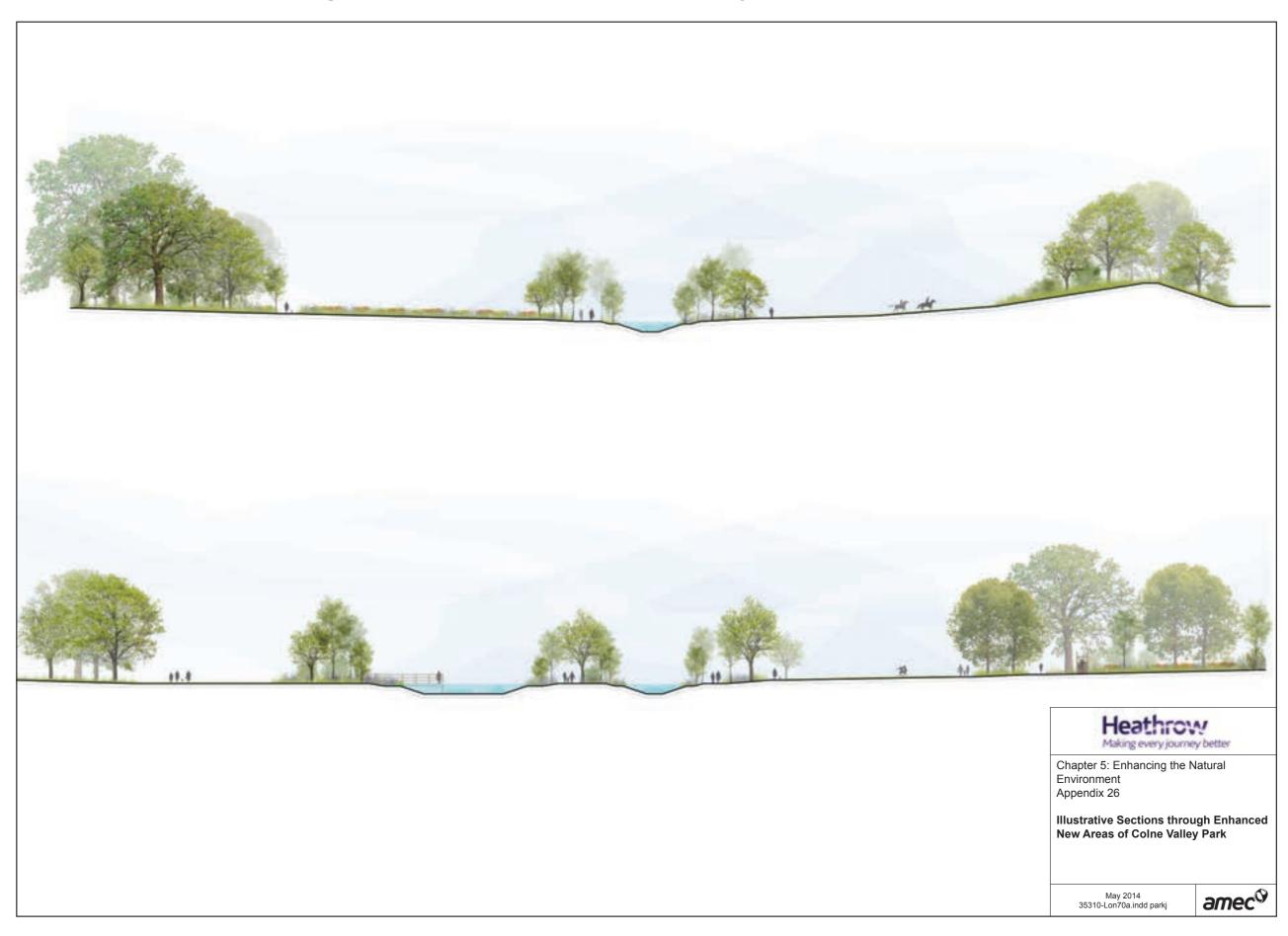
#### 24 Key Rivers and Associated Environment Agency Flood Zones

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### 25 Flood Risk Mitigation Strategy

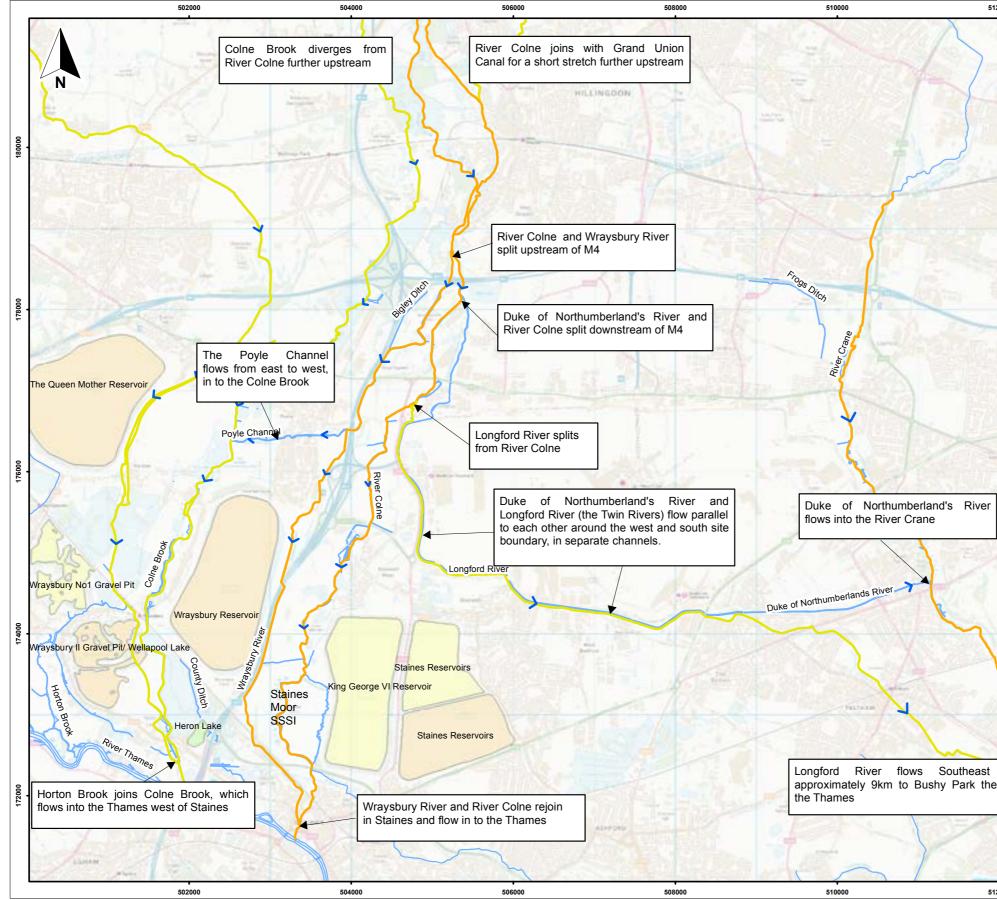


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## 26 Illustrative Sections through Enhanced New Areas of Colne Valley Park

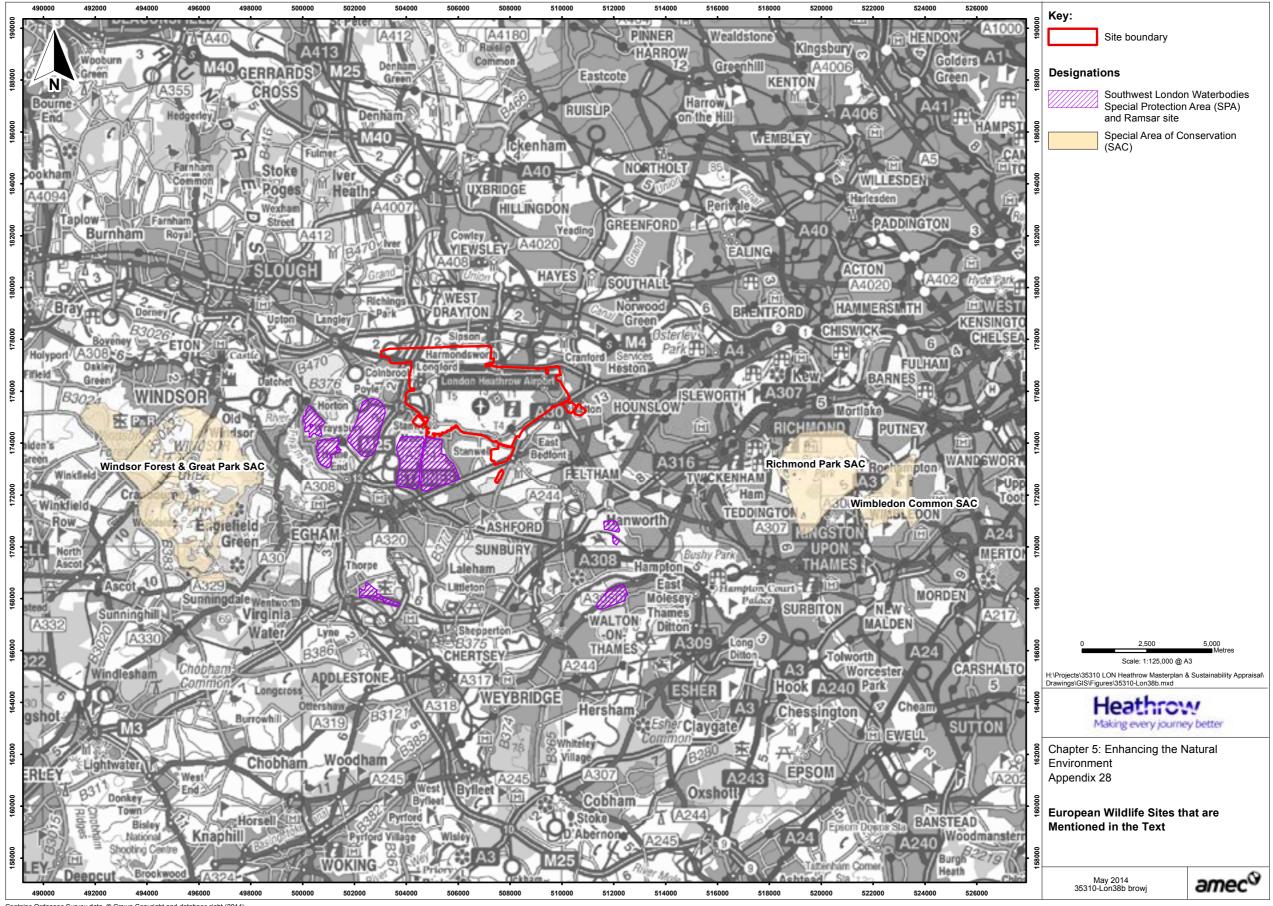
# 27 WFD River Waterbody Status



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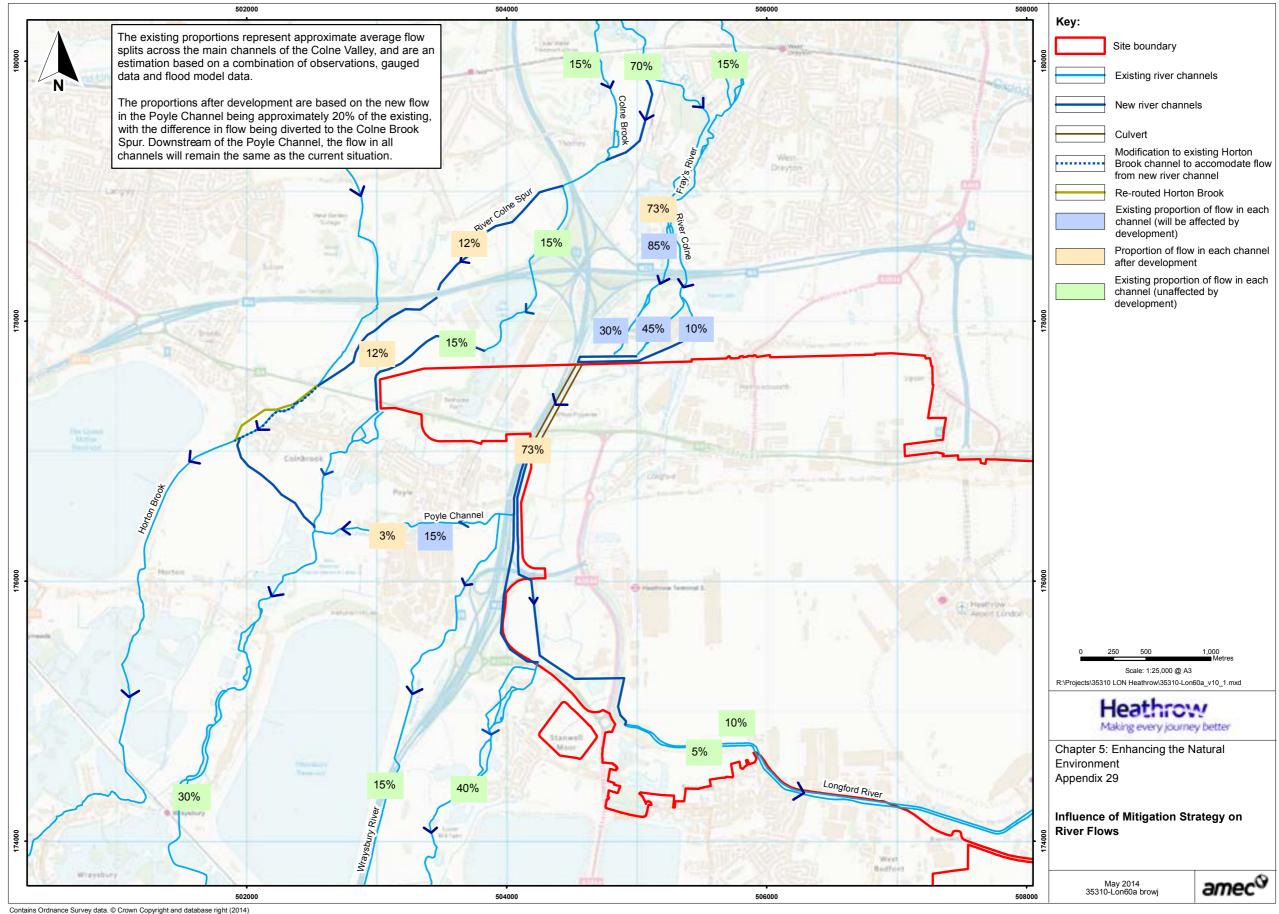
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2000		May 2014 35310-Lon59a browj

#### 28 European Wildlife Sites



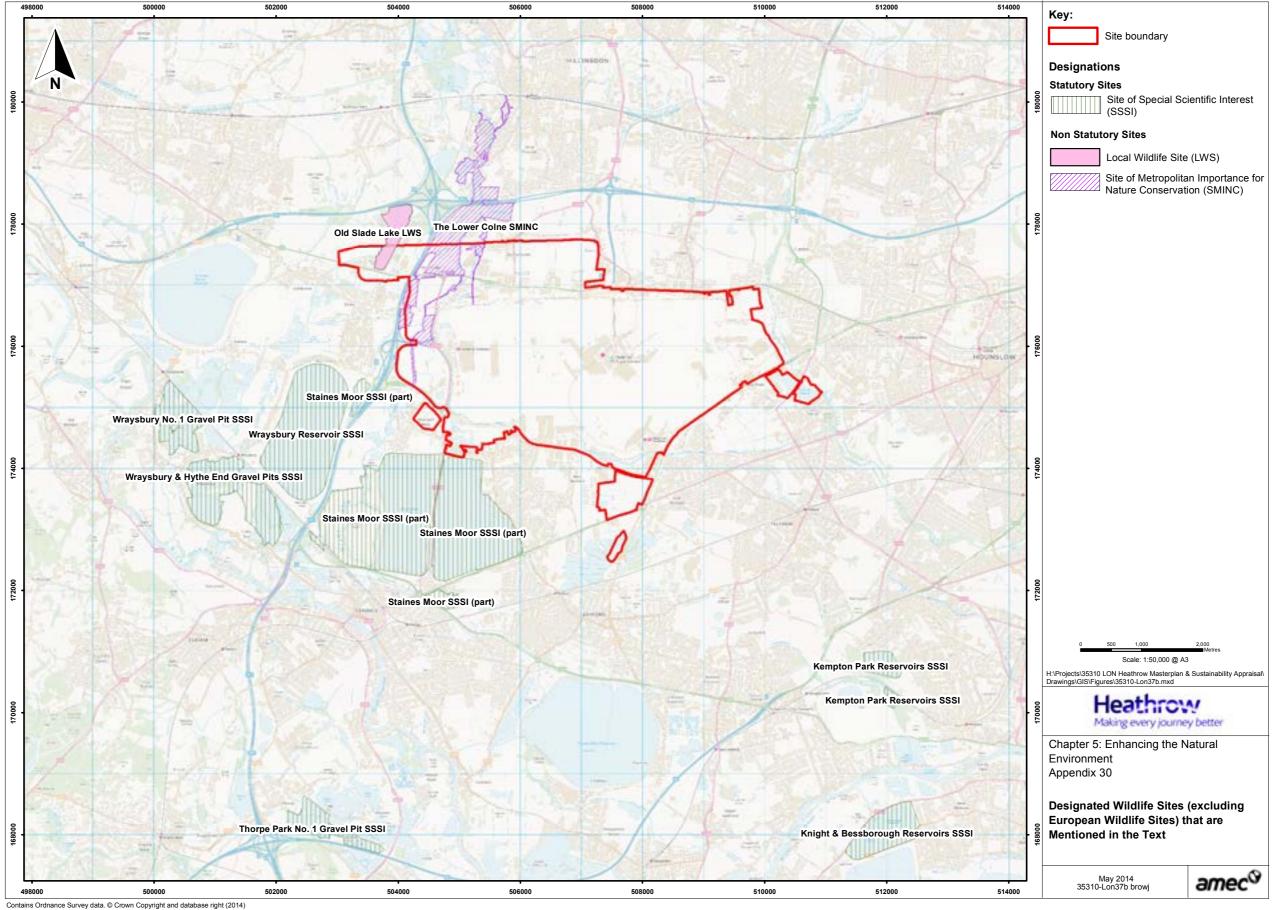
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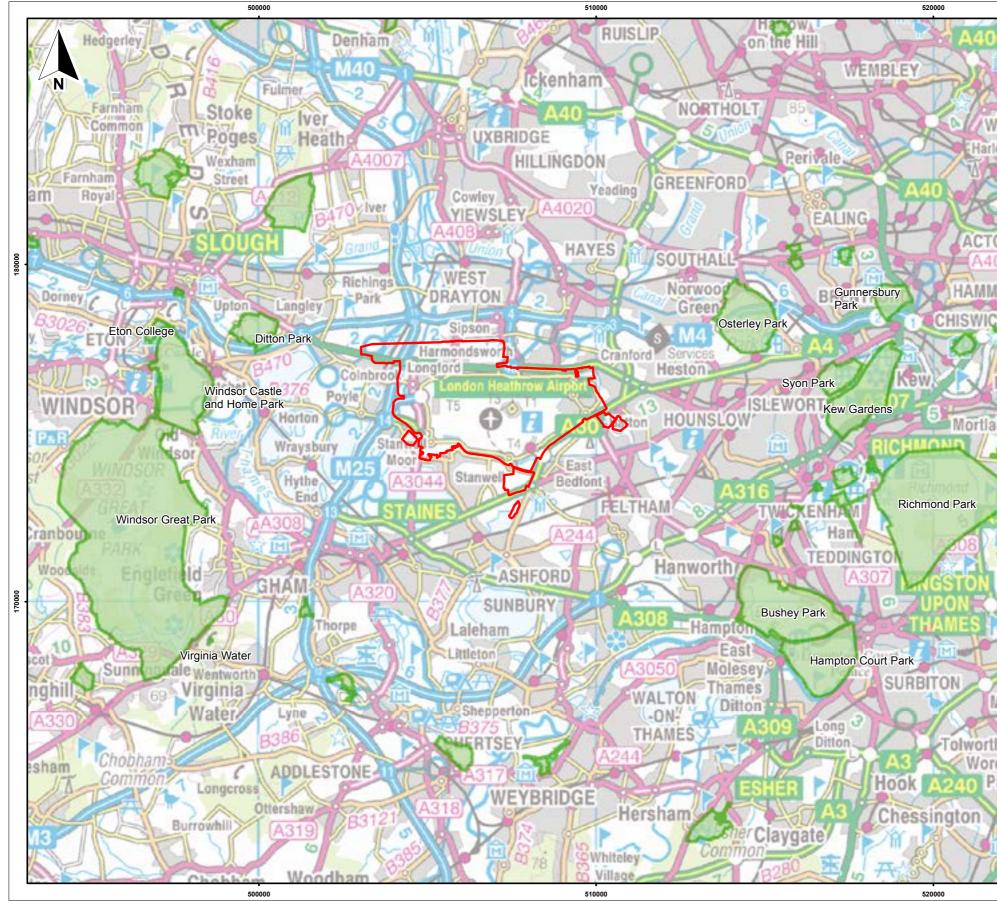
### **29 Influence of Mitigation Strategy on River Flows**



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### **30 Designated Wildlife Sites**

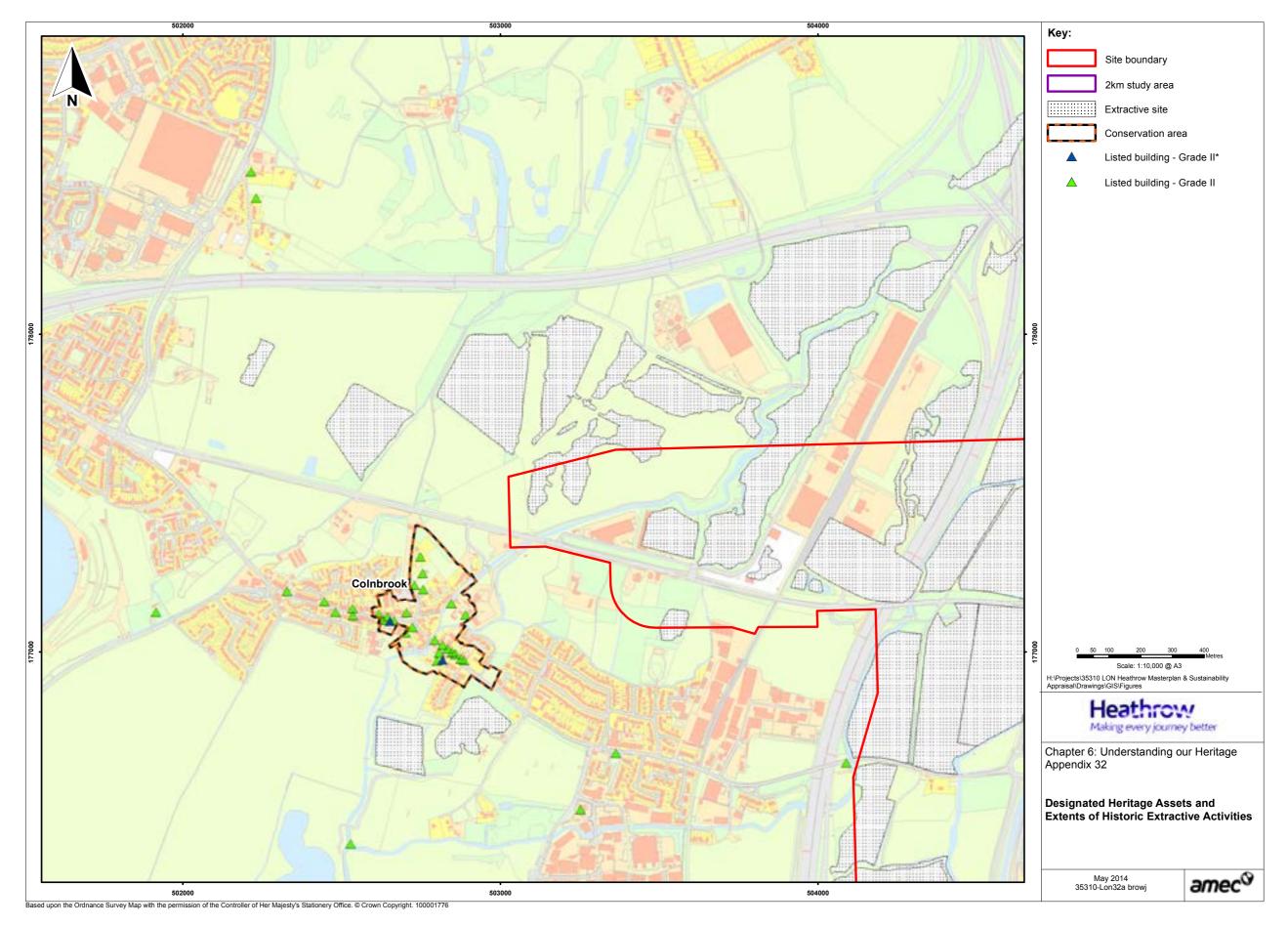




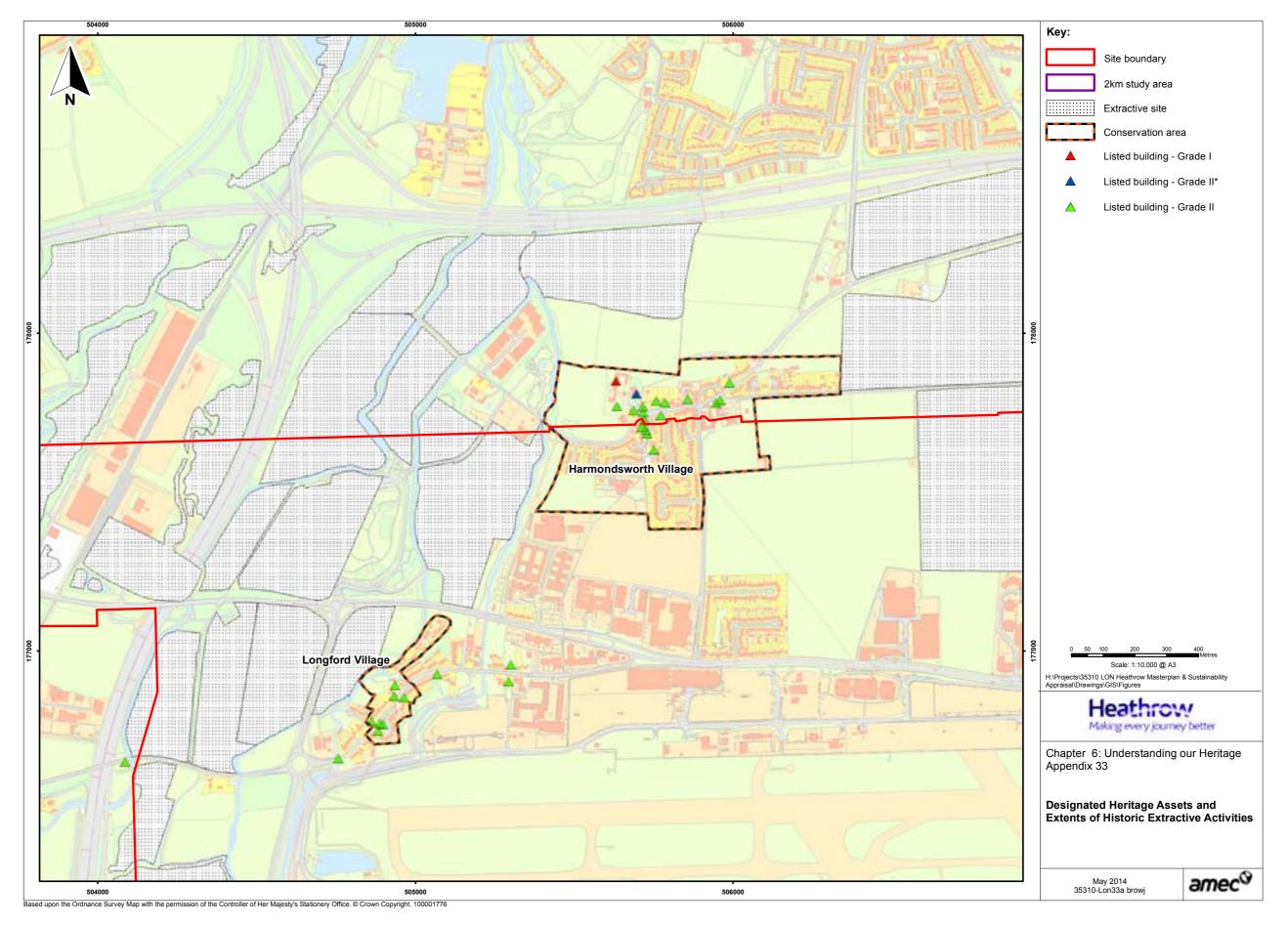
#### **31 Registered Parks and Gardens within the Projected Area of Operation**

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	Key:	
6	Site boundary	
नि	Registered park and garden	
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A	Kilometers Scale: 1:100,000 @ A3	
NEV	H:\Projects\35310 LON Heathrow Masterplan & Sustainability Appraisal\Drawings\GIS\Figures	
ALD	Heathrow Making every journey better	
T	Chapter 6: Understanding our Heritage	-
ceste	Appendix 31	
ark P	Registered Parks and Gardens within	
	the Projected Area of Operation	
1E		
	May 2014 35310-Lon31a browj	-
	35310-Lon31a browj	

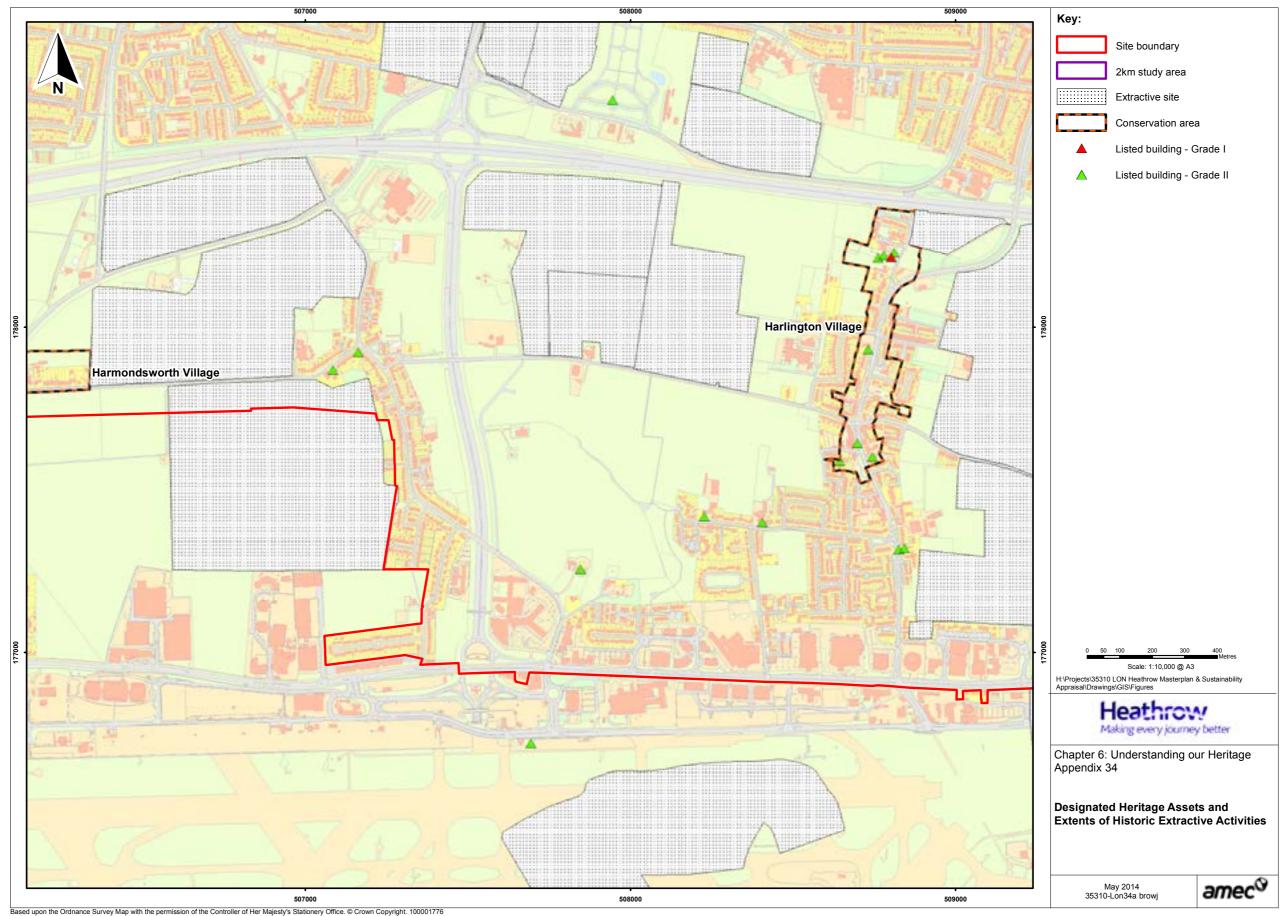


# 32 Designated Heritage Assets and Extents of Historic Extractive Activities



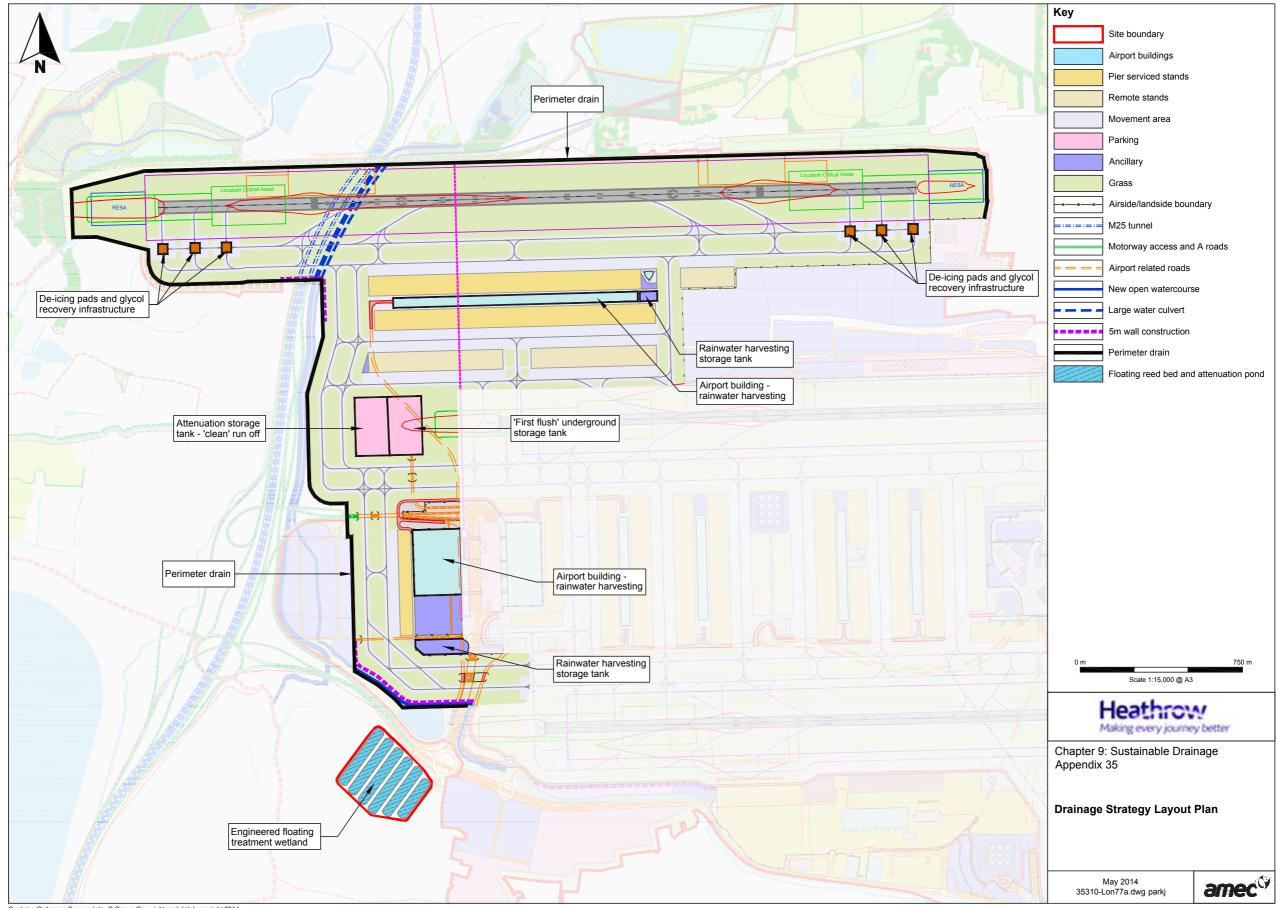
33 Designated Heritage Assets and Extents of Historic Extractive Activities

Volume 3 - Taking Britain further – A3 Appendices Page 41



# 34 Designated Heritage Assets and Extents of Historic Extractive Activities

# 35 Drainage Strategy Layout Plan



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## **36 Construction Schedule**

ctivity ID	A set of the bill server a	<b>A</b> 2 2 3 4	01	Contract of the second s		-						nme - D					0000	0000	0007			0000
	Activity Name	Original Duration	Start	Finish																		
Heathrow Exp	oansion Programme - Development S	5385d	12-Jan-15	14-Nov-36		+														+		
Key Milestone	es	5203d	30-Sep-15	14-Nov-36			-													+		
MPC-2025-3250	3R implement works finished	0d		25-Apr-28																	<b>β</b> R impl	lement
3R Campus		3093d	30-Sep-15	25-Apr-28			-													-	25-Apr-	-28, 3F
MPC-2025-5260	Government policy decision on 3R	0d		30-Sep-15*			•	Governme	nt policy de	cision on 3	R											
	Development Consent Order approved	0d		23-May-19			ļ				Dev 🔁	elopment C	onsent Or	der approv	/ed						.	
	Open 3R Runway	0d		25-Jun-25													<b> ™</b> Op	en 3R Ru	1.			
	Open T6A (Phase 1)	0d		23-Jul-26															pen T6A (F		r I	
	Open T6B (Phase 1)	0d		27-Oct-26			ļ											<b>, ≓</b>	Open T6E			
	Open T6A (Phase 2)	0d		25-Jan-28															[		en T6A	
	Open T6B (Phase 2)	0d	06-Oct-26	25-Apr-28 22-Jun-28														_			Open T	un-28,
Western Campu	S Open T5A Airside Station	4100 0d		06-Oct-26				+		+					+	+		- <u> </u> <u> </u> _	Open T5A	Aireick	1	
	Close T3 (Soft Close)	0d 0d		24-Nov-26															Close T3		I I	
	Open T5B Airside Station	0d 0d		19-Oct-27														∣∣⊪⊢			T5B Air	irside (
	Open T5C Airside Station	0d 0d		22-Jun-28				+	+	+	{· <b>}</b>				+	+		┉╟╓╴	+		Open	
Eastern Campus	•			14-Nov-36																		
·	Open T2A Phase 2 Terminal (Part 1)	Od		15-Dec-32																		
MPC-2025-1010		0d		20-Sep-33			İ	1	+	·	† <b>†</b>				1	+	- <b> </b>	··· <b> </b> · <b>  </b>	·	*	<u> </u> -	
MPC-2025-1020	•	Od		16-Jan-34																		
MPC-2025-2370	Open T2A Phase 2 Terminal (NW Corner)	0d		16-Jun-34																		
MPC-2025-2940	Open T2A phase 3	0d		11-Jun-36	[		Ì	1	1	1	11		1		1	1	1-1	<b> -    </b>   -	1	11		
MPC-2025-2380	Open T2C Pier	0d		14-Nov-36																		
Planning		1100d	12-Jan-15	24-Jun-19		-					24-	Jun-19, Pla	nning									
	Commission Reports	0d		29-Jun-15*			Cor	mmission F	leports	+	† <b>†</b>				+	+			++	· •		
	Scope DCO and procure resources	156d	12-Jan-15*	21-Aug-15				cope DCO	1.	re resourc	es											
MPC-2025-6130	S42 & S46 notice of proposed DCO	0d	22-Sep-15			ה ה	_	\$42 & S46		1	11											
MPC-2025-6140	S47 consultation on the SOCC	0d	20-Oct-15				₩.	S47 consu	Itation on t	he SOCC	- <b> </b>					+				1		
MPC-2025-6160	1st Draft DCO Consultation - Outline EIA, Airspace, HIA, 1	51d	10-Oct-16	19-Dec-16			1	_ <b>⊷</b> □	1 st Draft	t DCO Con	sultation - (	utline EIA,	Airspace,	HIA, TA an	d EQA							
MPC-2025-6150	Gain Site Survey Rights (s53), Survey	417d	27-Jan-16	25-Sep-17			╎┕		-	Gain Site S	urvey Righ	s (s53), Si	rvey									
MPC-2025-6170	2nd Draft DCO Consultation - full draft assessments	51d	14-Jul-17	25-Sep-17				1		2nd Draft D	CO Consu	Itation - full	draft asse	ssments	1				11	1.		
MPC-2025-6120	Prepare DCO	637d	24-Aug-15	26-Mar-18		4	-	-	1	Prepa	re DCO											
MPC-2025-6180	DCO Application	0d		26-Mar-18						DCO.	Application											
MPC-2025-6190	DCO Examination	246d	27-Mar-18	25-Mar-19					1	-	DCO	Examinatio	n n									
	DCO Consent	0d		23-May-19							DC	Consent										
MPC-2025-6200	SoS consideration	61d	26-Mar-19	24-Jun-19							🗝 🔲 So	considera	tion									
Implement		5385d	12-Jan-15	14-Nov-36		-														T		
3R Campus		2196d	24-May-19	25-Apr-28																╈╸	25-Apr-	-28, 3F
Demolition & De	cant Commercial/Public/Residential area	1100d	24-May-19	03-Nov-23												03-Nov-23	3, Demolitic	n & Deca	nt Commer	cial/Pu	plic/Res	sidenti
MPC-2025-3780	Discharge Development Consent Order requirements	170d	24-May-19	03-Feb-20							╞━━	Dischar	ge Develo			r requireme	ents			T		
MPC-2025-3350	Demolition & Decant Commercial/Public/Residential area	740d	04-Feb-20	03-Feb-23							4				+	tion & Deca			/Residenti	alarea		
MPC-2025-5970	Compensation and CPO		24-May-19								<b>-</b>					Compens	ation and C	PO				
Airfield & associa			14-Sep-21										-			Compens	25.	Jun-25, A	irfield & ass	cciate	a equip	oment
	New NW1 Runway & associated Taxiways (excl stands)		14-Sep-21										╞╺┝		1	1	-Ne		unway & as			
T6A new Termina	· · /		06-Feb-23												•			2	3-Jul-26, T	6A new	Termir	inal (Ph
	T6A Terminal (Phase 1), incl stands		06-Feb-23												<b>-</b>				Terminal (I			
	Baggage system installation		16-Jan-24	-															gage syste perationa	ni insta	llation	
	Operational Readiness		29-Sep-25																perationa	Readin	ess	
T6A new Termina			16-Mar-26																		Jan-28	
	T6A Terminal (Phase 2), incl stands		16-Mar-26																	6A I	erminal	a (Phas
	Baggage system installation		28-Aug-26					+				H		<b> </b> -	+	+			· · · · · · · ·	-pauga	ege sys eration	
	Operational Readiness		24-Aug-27																		I I	
T6B satellite (Pha	T6 B Pier (Phase 1)		22-May-23 22-May-23																B Pier (Ph		satenite	e (Fila:
	Baggage system installation		16-Dec-24					+		+									ggage syst		tellation	
	Operational Readiness		13-Jan-26													'			Operation		dinose	,
T6B satellite (Pha	•		04-Sep-26																Operation		25-Apr-	-28 T
	T6B Pier (Phase 2)		04-Sep-20 04-Sep-26					+	+	+	+	H		⊦ <b>ŀ</b>	++	+	+-++-	╎╌╎┊ <u></u>	· · · · · · · ·		Pier (Pl	
	Baggage system installation		29-Apr-27									lí										
	Operational Readiness		17-Dec-27																	-	Operati	tional F
	TS and Baggage tunnels		06-Feb-23	-				+	+	+	+	+		⊦ <b>ŀ</b>	1			<u> </u>	+		Jan-28	
	Airside Roads, TTS tnl, Baggage tnl		06-Feb-23												+				1		side Ro	
Western Campu			09-Jan-24													-					22-Ju	
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Phase	2)																				
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	ide Sta	tion			+											• • •					
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	estern (	- 1																			
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## **36 Construction Schedule**

ID Activity Name	Original Start	Finish	2014					Developmen			2025 20	26 2	127 0	2028 2029 2030 2031	2032 2033		08-May-14
	Original Start Duration	1 111311															
nabling Works	194d 09-Jan-24		<u> </u>			· · · · · · · · · · · · · · · · · · ·		· · · · · · · · ·		11	Oct-24, Enab	ling Work	s				
MPC-2025-1160 Enabling works									]     [		abling works						
5A Airside Station												444		A Airside Station		£- <b>[</b> ][	
MPC-2025-6020 T5 A Airside Station		06-Oct-26										15 A		ation			
5B Airside Station	505d 01-Oct-25												; <u></u>	Oct-27, T5B Airside Station			
MPC-2025-1340 T5 B Airside Station	505d 01-Oct-25										·····			B Airside Station		⊧- <b>!!!</b>	
5C Airside Station	363d 06-Jan-27													22-Jun-28, T5C Airside Station			
MPC-2025-1380 T5 C Airside Station	363d 06-Jan-27													T5 C Airside Station			
VC Systems Integrations	593d 28-Jan-26	22-Jun-28												22-Jun-28, WC Systems Integrati	ns	· · · · · · · · · · · · · · · · · · ·	
MPC-2025-1600 Western Campus Systems Integration works start	0d 28-Jan-26 0d	00 100 00										estern Ca		terns Integration works start			
MPC-2025-1060 Western Campus implementation works finished MPC-2025-1560 Western Campus Systems Integrations		22-Jun-28 22-Jun-28												Western Campus implementation Western Campus Systems Integra			
el farm	350d 24-Feb-25											23 10	26, Fuel fa			· · · · · · · · · · · · · · · · · · ·	
MPC-2025-4770 Extended Fuel farm, including fuel infrastructure	350d 24-Feb-25																
astern Campus	2839d 09-May-25											LAGING		rm, including fuel infrastructure			
2 A Phase 2	1258d 04-May-29						·····		++++		•••••		· {				T2 A Phase 2
T2A Phase 2 Terminal (Part 1)	895d 04-May-29														15 Dec.3	2, T2A Phase 2 Terr	
MPC-2025-24 T2 A Substructure, incl TTS box	387d 04-May-29																
MPC-2025-24 T2 A Substructure, Incl 11'S box MPC-2025-31 Baggage system installation	400d 22-Nov-30						·····		++++	-+		₩+	· { +		Baggage syste	em installation	
MPC-2025-51 Baggage system installation MPC-2025-25: T2 A Operational readiness part 1	165d 23-Apr-32															rational readiness p	part 1
T2A Phase 2 Terminal (NW Corner)	928d 04-Sep-30																T2A Phase 2
MPC-2025-25 T2 A Complete substructure	338d 24-Nov-31		··+						++++	-+		<u>  </u>	· { +			Complete substructu	
MPC-2025-24 T2 A Northwest corner superstructure, fit-out and external	226d 14-Apr-33															T2 A Northwest	
MPC-2025-24 T2 A Superstructure, fit-out and stands	903d 04-Sep-30														┹━━┵╤╦	T2 A Superstr	
MPC-2025-24 Nove from Pier 7 to T2 A	100d 23-Jan-34		-+						++++	-+		₩+	<b>⁺</b> ₩			Move from P	
1 Works	1452d 15-Jun-26														10-May-32, 11	L	
MPC-2025-2560 Stands and Kilo Taxilane Works (full scope, incl demolition	525d 15-Jun-26*	-										+++		Stands and Kilo Taxiane Works (			
MPC-2025-2570 T1 Demolition - 1st cut (FCC & Pier 3)	186d 31-Jul-28								++++		····•		·	T1 Demolition - 1st cut (I	CC & Pier 3)		
MPC-2025-2580 T1 Demolition - Main demolition	354d 22-Nov-30	-													T1 Demolition - I	Main demolition	
2 A Phase 3	1006d 11-May-32	-															
MPC-2025-2890 T2 A Phase 3	906d 11-May-32						·····						· { +				T2 A Ph
MPC-2025-2900 Operational Readiness	210d 02-Aug-35																
Airside Roads adjacent T2	485d 24-Nov-26													14-Nov-28, Airside Roads adj	acent T2	· · · · ·	
MPC-2025-2630 Airside Roads adjacent T2	485d 24-Nov-26						·····		++++					<u></u>		·	
astern Maintenance Base (EMB)	1300d 24-Nov-26													Airside Roads adjacent T2	■ 16-Mar-32, Easter	rn Maintenance Bar	ase (FMB)
MPC-2025-2820 EMB WS1 - Road Diversion	490d 24-Nov-26*													EMB WS1 - Road Diversion	V 10 114 02, 2414		
MPC-2025-2810 EMB WS 2 - Ancillary Relocations	427d 19-Oct-27	-					·····		++++						elocations	(	
MPC-2025-2860 EMB WS 3 - Hanger Relocation	560d 21-Nov-28														WS 3 - Hanger Relocat	tion	
MPC-2025-2870 EMB WS 5 - Alpha & Bravo Taxiway Reconfigurations	1116d 27-Aug-27														EMB WS 5 - Alpha		Reconfigurati
2 C new pier	1153d 16-Mar-32						·····										
MPC-2025-3180 Baggage system installation	400d 28-Mar-34																Baggage s
MPC-2025-2670 T2 C new pier, incl TTS	1053d 16-Mar-32																T2
MPC-2025-2680 Operational Readiness, incl TTS	200d 01-Feb-36						·····		++++				· { +			ſ <u></u>	
Iorthern and Southern Airside Roads	1070d 09-May-25													10-Sep-29, Northern	and Southern Airside B	bads	
MPC-2025-1210 NAR T5B - T5C	406d 09-May-25												R T58 - T				
MPC-2025-1230 SAR T2D to T2E	210d 27-Jun-28								+++++					SAR T2D to T2E		r	
MPC-2025-1220 SAR T2E to CTA	375d 07-Mar-28	-											-	SAR T2E to CTA			
2D new pier	1749d 24-Nov-26											∥ ┿──			┿╾╍┿╌┿┿┿	🔻 16-Jan-34, T2D n	new pier
MPC-2025-1510 Demolish & clear Terminal 3 & remaining piers	491d 24-Nov-26								++++	-+	++-+	╢╍		Demolish & clear Terminal 3 &	remaining plers	[]-[-]-	
MPC-2025-1940 T2D new pier	1053d 04-May-29															D new pier	
MPC-2025-3220 Baggage system installation	400d 05-Jan-32															2D new pier aggage system insta Operational Read	tallation
MPC-2025-1950 Operational Readiness	200d 21-Mar-33		·						+++++	-+		<u> </u>	· { · +    ·			Operational Read	adiness
2E new pier	991d 11-Sep-29													║││┲┿┯┿┿┿	┿┯┯┿╋╈┇	0-Sep-33, T2E new	w pier
MPC-2025-1890 T2E new pier	891d 11-Sep-29	-														new pier	
/PC-2025-3230 Baggage system installation	373d 17-Oct-31		-+						++++	-+		11	· {· · · · / }}·		Baod	age system installati	ation
/PC-2025-1900 Operational Readiness	210d 10-Nov-32															perational Readines	ess
2 to Pier 6 Connector	315d 14-Nov-28													05-Mar-30, T2	Pier 6 Connector		
/IPC-2025-3310 T2 to Pier 6 Connector	315d 14-Nov-28		-+				·····		++++	-+	+-	11	<u>†</u> ∰	T2 to Pier 6 Co	nector	( <b>1</b> -1	
C Systems Integrations	1427d 05-Feb-31														┿╾╍┿╼╼╋┥	·	
MPC-2025-2800 Eastern Campus Systems Integration works start	0d 05-Feb-31													Easter	rn Campus \$ystems Int	tegration works start	art i
MPC-2025-2410 Eastern Campus implementation works finished	0d	14-Nov-36	-+						++++	-+		<b>  </b>	·			( <b></b>	·····
MPC-2025-2760 Eastern Campus Systems Integrations	1427d 05-Feb-31																
eneral Works to Support 3R Development	5166d 12-Jan-15		↓		_												07-Jan-:
											·····		<u></u>		-+	/ <u> </u> <u> </u>	
andside Road Connections	1714d 01-Aug-19	17-Jul-26	1 11	1								<b>V</b> 17+, III-	ZD. Lanmer	ide Road Connections			

## **36 Construction Schedule**

| Name<br>Id tunnel<br>In Perimeter Road temporary diversion<br>In Perimeter Road tunnel<br>Id Connections<br>TA Road tunnel<br>ersion<br>Road diversion<br>Ile Road diversion<br>ad (A4) Landside Road diversion<br>hections | Original<br>Duration         Start<br>01-Aug-19           862d         01-Aug-19           174d         01-Aug-19           688d         20-Apr-20           850d         19-Aug-19           850d         19-Aug-19           922d         07-Apr-20           922d         07-Apr-20           753d         30-Apr-20   | 17-Apr-20<br>03-Feb-23<br>03-Feb-23<br>03-Feb-23   
   
   
  |   |   |   | 2017 20   | 20   | 19 202  | 0 2021   | 2022   | Heathrow Expansion Programme - Development Schedule           2014         2015         2016         2017         2018         2019         2020         2021         2022         2023         2024         2025 |  |   |  
  |  |  |  |   |   |   
  | 2032   | 203  | 203  | 4 2035  
   | 2036   | 08-May-14 13:<br>2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 20  |  |  |  |  |  |  |  |  |  |  |  |  |
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| n Perimeter Road temporary diversion<br>n Perimeter Road tunnel<br>bad Connections<br>TA Road tunnel<br>ersion<br>Road diversion<br>le Road diversion<br>ad (A4) Landside Road diversion                                    | 174d         01-Aug-19           688d         20-Apr-20           850d         19-Aug-19           850d         19-Aug-19           922d         07-Apr-20           922d         07-Apr-20   | 17-Apr-20<br>03-Feb-23<br>03-Feb-23<br>03-Feb-23   
   
   
  |   |   |   | alalalala   | alalala  |   |  |  | _   |  |   | -  
  | _  |  |  |   |   | | | | | | | | | |
  |  | adala  | lalala   |   
   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| n Perimeter Road tunnel<br>oad Connections<br>TA Road turnel<br>ersion<br>Road diversion<br>le Road diversion<br>ad (A4) Landside Road diversion  | 688d         20-Apr-20           850d         19-Aug-19           850d         19-Aug-19           922d         07-Apr-20           922d         07-Apr-20  | 03-Feb-23<br>03-Feb-23<br>03-Feb-23  
   
   
  |   |   |   |   |  |   |  |  | 03-F  | eb-23, South   | nern Peri   | ineter Ro  
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