

Southampton to London Pipeline Project

Volume 6

Environmental Statement (Volume D)
Appendix 4.1: Pipeline Route Corridor Options
Application Document: 6.4

Planning Inspectorate Reference Number: EN070005
APFP Regulation No. 5(2)(a)
Revision No. 1.0
May 2019



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Appendix 4.1 Pipeline Route Corridor Options

1.1 Reasoning Behind Corridor Creation and General Description

1.1.1 Table 1.1 provides a summary of the route corridors initially considered by the project, forming the 'long list' in early 2018. The subsequent sifting to a 'short list' of six route corridors and identification of the preferred route corridor are explained in Chapter 4 (Design Evolution).

Table 1.1: Reasoning Behind Corridor Creation and General Description

Corridor	Reasoning Behind Corridor Creation and General Description
SOUTH	
A	Developed to avoid South Downs National Park (SDNP). It skirts the west of the National Park and Winchester. After Winchester, it heads northeast towards East Stratton, and then east towards the Alton Pumping Station. This is the longest corridor in the southern section.
B	Developed to reduce the length of replacement pipeline in SDNP (but not to avoid it completely). Follows existing pipeline alignment as far as possible, including within SDNP until it diverges at Preshaw Wood to approach the west of Cheriton. It heads northeast across the A31 and goes towards Heath Green and Bentworth. It then tracks east across the A339 before reaching the Alton Pumping Station.
C	Developed to reduce the length of replacement pipeline in SDNP. Follows existing pipeline alignment as far as possible, including within SDNP until it diverges northwest towards Lower Upham. Crosses the A31 north of Cheriton, and east across the A339 near Bentworth before reaching Alton Pumping Station.
D	Developed to reduce the length of replacement pipeline in SDNP. Follows the existing pipeline, heading northeast from Boorley Green. Passes between Bishop's Waltham and Upham, where it enters SDNP, to as far as West Tisted. After West Tisted, it heads north, passes to the east of Ropley and skirts Heath Green. It then heads northeast and passes south of Lasham, before heading east across the A31, past Alton, to reaches Alton Pumping Station from the west.
E	This corridor was developed as a way to reduce the length of replacement pipeline in the SDNP. This corridor largely follows Corridor B until its northern section where it diverges as it approaches Alton. It then passes between Chawton Park Wood and Bushy Leaze Wood, reaching Alton Pumping Station from the southeast.
F	In common with Option D, this option was developed as a way to reduce the length of replacement pipeline in the SDNP. It also avoids development areas to the north of Alton. This corridor follows the existing pipeline route, entering the SDNP at Bishop's Waltham. It diverges from the existing route southwest of Blackhouse Copse. It then heads north to pass around Four Marks and Chawton Park Woods. This allows the corridor to avoid re-entering the SDNP. It then passes between Chawton Park Wood and Bushy Leaze Wood, approaching the Alton Pumping Station from the southwest.
G	Developed to follow the existing pipeline where possible to make best use of existing infrastructure and landowner and stakeholder relationships. Its alignment through Hampshire and Surrey takes into account features that weren't built or protected in the 1960s, when the existing pipeline was built. From Boorley Green, the corridor heads northeast, passing between Bishop's Waltham and Upham. Here it enters the SDNP, and then passes Bramdean under the A272 and the A32. The final approach to Alton passes through SDNP between Lower Farringdon and Chawton, southeast of the A31. It passes Alton before crossing the River Wey to approach Alton Pumping Station from the southwest.



Corridor	Reasoning Behind Corridor Creation and General Description
NORTH	
H	<p>This corridor largely follows the existing aviation fuel pipeline, with a realignment being incorporated to the north to avoid going through Chobham Common Site of Specific Scientific Interest (SSSI)/ National Nature Reserve (NNR), also an internationally protected Special Protected Area (SPA)/ Special Area of Conservation (SAC).</p> <p>This corridor begins at the Alton Pumping Station and heads to the northwest of Farnborough. It then goes in between sections of Chobham Common before heading beneath the M25 and north to the West London Terminal storage facility.</p>
J	<p>This corridor was developed to follow the existing aviation fuel pipeline where possible to make best use of existing infrastructure and landowner and stakeholder relationships.</p> <p>This corridor begins by heading east from Alton. It crosses the A32 and heads northeast while keeping to the southeast of Upper and Lower Froyle. The corridor continues to the southeast of Crondall before crossing the A287 and keeping to the south-eastern outskirts of Fleet. It then passes Tweseldown Racecourse from the northwest.</p> <p>Where the Fleet Road (B3014) meets the railway line, this corridor has two sub-options. These are areas where the corridor could follow alternative routes, but are not separate corridors. The first sub-option to the south follows the existing pipeline, passing close to Farnborough Station and through Blackwater Valley and Frimley Green. Here it joins back up with the other sub-options at The Maultway and Deepcut Bridge Road. The second sub-option to the north heads from the Fleet Road/railway line towards where the A325 crosses the A331. From here it passes close to Frimley Park Hospital, thereafter closely following the Chobham Road (B311) and the Old Bisley Road. At The Maultway it joins up with the other sub-option.</p> <p>This corridor travels around Bisley and Pirbright Ranges towards Chobham Common. At this point, there are two sub-options. These were created as options to potentially reduce possible impacts on the nationally and internationally important Chobham Common. The first follows the existing pipeline route through Chobham Common (NNR, SSSI and part of a wider SPA and SAC) until it joins up with the other sub-option just north of the Longcross Road and Stonehill Road junction. The second sub-option travels easterly from the B383 near Burrow Hill Green and aims to avoid crossing Chobham Common. Near Dunstall Green it turns north to follow the Stonehill Road until it joins up with the other sub-option just north of the Longcross Road and Stonehill Road junction.</p> <p>At this point the corridor travels easterly until it crosses the M25, the railway line and Chertsey Road, it then heads toward the River Thames.</p> <p>After crossing the River Thames at Dumsey Meadow SSSI and the M3, this corridor (J), Corridor M and Corridor Q all head north, with sub-options to the west of the Queen Mary Reservoir. At the Staines Bypass the corridor merges back together and heads north until the West London Terminal storage facility.</p>
K	<p>This corridor largely follows the existing aviation fuel pipeline, with a realignment being incorporated to the south to avoid going through Chobham Common SSSI/NNR, also an internationally protected SPA/SAC.</p> <p>This corridor begins at Alton Pumping Station and heads to the northwest of Farnborough. It then goes northeast across the River Blackwater between Frimley Business Park and Frimley Bridge (A325). It then follows Chobham Road where it joins Corridor J at the junction with the B3015.</p>
L	<p>This corridor was developed to avoid national and European designated sites that Option J passes through and to reduce the length of replacement pipeline in floodplain areas between West Byfleet and the West London Terminal storage facility compared to Options M and Q. It also includes a realignment compared to Options M, N, O, P, Q and R to avoid the floodplain and mineral extraction areas to the east and southeast of Old Woking and Pyrford.</p> <p>This corridor heads east near Woking and then northeast until Walton-on-Thames. It then goes north towards the West London Terminal storage facility.</p>
M	<p>This corridor was developed to avoid national and European designated sites that Option J passes through. It also avoids the SDNP that Options L, O, P, Q and R all pass through.</p>



Corridor	Reasoning Behind Corridor Creation and General Description
	<p>This corridor begins by following the A31 to its south-eastern side, crossing just south of Bentley. It then continues northeast following the A31 and then avoids the urban area west of Farnham before joining the A287 adjacent to Farnham Castle. The corridor then follows along streets in Farnham in a general easterly direction. It then crosses the A325 and the A31, skirting around the south of the Shepherd and Flock roundabout. The corridor heads east and crosses the River Wey to the point where Moor Park Lane and Rock House Lane meet. From this point this corridor is the same route as Corridor Q.</p> <p>From Rock House Lane, it goes east, parallel to Seale Lane and crosses the A31 before continuing east to Wanborough. The corridor turns northeast in Wanborough and Wanborough Wood and then follows the A323 eastbound until it reaches Holly Lane. Here it turns briefly north again to skirt around the northwest of Worplesdon, before heading east towards Sutton Green.</p> <p>The corridor then goes northeast, crossing the River Wey and A247 and keeping to the southeast of Woking Sewage Treatment Works. It then passes West Byfleet and Byfleet to cross the M25 near Byfleet Recreation Ground. From here, the corridor follows the eastern bank of the River Wey, and northbound crosses the river again between Addlestone and Weybridge. Finally, the corridor crosses the Thames east of Dumsey Meadow SSSI before joining Corridor J, just before it crosses the M3.</p> <p>After crossing the River Thames at Dumsey Meadow and the M3, this corridor (M), Corridor J and Corridor Q all head north, with sub-options the west of the Queen Mary Reservoir. These are areas where the corridor could follow alternative routes, but are not separate corridors. At the Staines Bypass the sub-options merge back together and the corridor heads north until the West London Terminal storage facility.</p>
N	<p>This corridor was developed to avoid national and European designated sites that Option J passes through and to reduce the length of replacement pipeline in floodplain areas between West Byfleet and the West London Terminal storage facility. It also avoids the SDNP that Options L, O, P, Q and R all pass through.</p> <p>This corridor crosses the A31 just south of Bentley. It follows the A31, avoiding the urban area just west of Farnham, before joining the A287 next to Farnham Castle. The corridor heads in an easterly direction before crossing the A325 and A31. It then skirts around the south of the Shepherd and Flock roundabout. Finally, the corridor goes east and crosses the River Wey where it travels north to the West London Terminal storage facility.</p>
O	<p>This corridor was developed to avoid national and European designated sites that Option J passes through and to reduce the length of replacement pipeline in floodplain areas between West Byfleet and the West London Terminal storage facility. It also avoids the community of Farnham that Options M and N pass through.</p> <p>This corridor heads east, crossing the A325 and Alice Holt Forest. It crosses the A287 and keeps east of Farnham where it heads east to cross the A31. The corridor then goes towards Sutton Green, before heading northeast to the M25 and north up to the West London Terminal storage facility.</p>
P	<p>This corridor was very similar to Option O, other than the final 5km section approaching the West London Terminal storage facility. This section passed round the southwest of Feltham to try to reduce the length of the pipeline installed in roads.</p> <p>This corridor heads in an easterly direction. It goes near to Woking and in a northeast direction until Walton-on-Thames. It heads north by diverting west of Feltham towards the West London Terminal storage facility.</p>
Q	<p>This corridor was developed to avoid national and European designated sites that Option J passes through. It also avoids the community of Farnham that Options M and N pass through.</p> <p>The corridor begins by heading east from Alton Pumping Station. It crosses the A325 and Alice Holt Forest (western section) within the SDNP before approaching the northwest of Frensham. After crossing the A287, the corridor heads north by skirting east of Alice Holt Forest (eastern section) and keeping to the east of Farnham.</p> <p>At the point where Moor Park Lane and Rock House Lane meet, this corridor is the same as Corridor M.</p>



Corridor	Reasoning Behind Corridor Creation and General Description
	<p>From Rock House Lane, it goes east, parallel to Seale Lane and crosses the A31 before continuing east to Wanborough. The corridor turns northeast in Wanborough and Wanborough Wood and then follows the A323 eastbound. Here it reaches Holly Lane where it turns briefly north again to skirt around the northwest of Worplesdon. It then heads east towards Sutton Green.</p> <p>It goes northeast, crossing the River Wey and A247, keeping to the southeast of Woking Sewage Treatment Works. Then it passes West Byfleet and Byfleet to cross the M25 near Byfleet Recreation Ground.</p> <p>From here, the corridor follows the eastern bank of the River Wey, and northbound crosses the river again between Addlestone and Weybridge. Finally, the corridor crosses the Thames east of Dumsey Meadow SSSI before joining the same corridor as Corridor J, just before it crosses the M3.</p> <p>After crossing the Thames at Dumsey Meadow and the M3, this corridor (Q), Corridor J and Corridor M all head north, with sub-options to the west of the Queen Mary Reservoir. These are areas where the corridor could follow alternative routes, but are not separate corridors. At the Staines Bypass, the sub-options merge back together and the corridor heads north until the West London Terminal storage facility.</p>

1.2 Embedded Design Measures

- 1.2.1 As explained in Chapter 4 Design Evolution, the Scoping Report (Esso, 2018) was based on an indicative design which comprised a number of embedded design measures. As the design continued to develop, the majority of these measures are still reflected in the Development Consent Order (DCO) project design, as set out in Table 1.2.
- 1.2.2 Additional embedded design incorporated since the Scoping stage design is then set out in Table 1.3.

Table 1.2: Scoping Stage Embedded Measures Retained in Project Design

Ref.	Area/Location	Measure Description	Justification
Section A			
D3	Next to former Botley Park Golf Course SU5157714740	Trenchless under stream and woodland belt with no haul road.	To avoid direct impacts on Priority Habitat, the SINC, a watercourse and the flood zone.
D4	Next to former Botley Park Golf Course SU5148714582	Move trenchless working area further south.	To have less impact on grazing marsh Priority Habitat, Sites of Importance for Nature Conservation and groundwater.
D5	North of Cross Lane SU5426519106	Locate haul road to the west away from trees in Priority Habitat.	To avoid woodland in Priority Habitat.
D6	Stephens Castle Down SU5603021682	Move Order Limits west to avoid four Priority Habitats, SINC and racecourse	To avoid four Priority Habitats, SINC and racecourse. Chalk grassland is difficult to restore and requested by South Downs National Park Authority.
D7	North of Sailors Lane SU5849323046	Pipe alignment is located to the west away from woodland block	To avoid impact on Priority Habitat – large woodland block.



Ref.	Area/Location	Measure Description	Justification
D8	Wheely Down Road SU5940123969	Locate compound to the north of Wheely Down Road. To avoid views from South Downs Way.	To avoid views from South Downs Way. Field to north is screened from South Downs Way
D9	Kilmeston Road SU5941424044	Use existing gap in hedgerow.	To reduce impact on north hedge which is Priority Habitat.
D12	Hinton Ampner SU6107425365	Create options to avoid Ancient Woodland at Hinton Ampner but also four Priority Habitat and two SINC's to the east.	To avoid Ancient Woodland, Priority Habitats and SINC's.
D13	East of Hinton Ampner SU6124825552	Use existing gap to avoid Ancient Woodland belt.	To avoid classified Ancient Woodland.
D15	Brockwood School SU6207926434	Move Order Limits west to avoid grounds of Brockwood Park School.	To avoid mature trees in school grounds and reduce disturbance impacts to school
D16	Godwin's Plantation SU6196726987	Move Order Limits west to avoid Godwin's Plantation.	To avoid SINC, Priority Habitat and trees that have bat potential.
D17	A272 SU6245627599	Extend length of trenchless crossing to the north.	To reduce impact on Priority Habitat, Flood Zone 2 and groundwater flooding.
D18	South of A272 SU6210327610	Use existing field access from Brockwood to avoid trees on Brockwood Lane.	To avoid Tree Preservation Order (TPO) trees.
D19	Rabbit Copse, West of Warnford. SU5847323090	Widen the Order Limits and Limits of Deviation (LoD) west of existing pipelines.	To provide flexibility to reduce impact on Rabbit Copse Priority Habitat.
Section B			
D20	North of A272 SU6258227533	Use existing field access from Tithelands Lane to avoid existing trees and Priority Habitat.	To avoid TPO and Priority Habitat trees.
D21	South of Green Lane north A272 SU6393028657	Locate haul road to the west to utilise gap in hedge	To reduce tree loss.
D22	Clinkley Road, north A272 SU6432929324	Locate haul road to the west to utilise gap in hedge	To reduce tree loss.
D23	Northwest of West Tisted SU6447229476	Minor repositioning – move Order Limits to the east.	To lessen tree loss in Priority Habitat woodland block.
D24	South of Kitwood Lane SU6715332920	Locate haul road to use existing gaps in hedge in two locations	To avoid removal of mature trees.
D25	Hawthorn Road SU6761233601	Locate haul road to use existing hedge gaps.	To avoid woodland Priority Habitat.
D26	West of Woodside Lane SU6958935111	Move Order Limits south.	To avoid Ancient Woodland and SINC.
D27	South of A32 SU7032235877	Move Order Limits south.	To avoid previous infilled gravel pit and risk of contaminated ground



Ref.	Area/Location	Measure Description	Justification
D28	A32 North of Lower Farringdon SU7048935933	Extend Trenchless under the A32.	To avoid mature trees and Flood Zone 2.
D29	East and west of A32 North of Lower Farringdon SU7041336056	Use existing farm access from A32 and side road.	To reduce tree loss and provide safer access.
D30	Woodside Lane SU6997735256	Move Order Limits south.	To reduce impact to SINC and Priority Habitat hedge.
D31	Chawton House SU7140836403	Widen Order Limits.	To provide working area at local constriction in the Order Limits in location of narrow LoD.
D32	Chawton House (location confidential)	LoD widened to the south.	To avoid impacts to habitat for a protected species.
D33	Selborne Road, Chawton. SU7214337620	Increase Order Limits and the LoD to the west.	To enable construction within an alignment that avoids woodland Priority Habitat
D34	Worldham Golf Course, Alton. SU7306837766	Move the alignment south.	To avoid great crested newt Pond 39.
Section C			
D39	Lane to Froyle SU7555242409	Move Order Limits south to use existing access.	To avoid mature oaks and existing wall.
D40	North of lane to Froyle SU7570542510	Widen Order Limits to take account of historic landfill.	To provide flexibility to avoid historic landfill if required
D41	Upper Froyle SU7595542874	Further widen Order Limits and the LoD to the west.	To reduce impact on trees on the east side.
D42	Upper Froyle SU7593742902	Further widen the Order Limits and the LoD to the west.	To reduce impact on trees on the east side.
D44	South of Gid Lane SU7606442980	Widen Order Limits to allow flexibility to avoid tree roots.	To allow for routing to avoid the Root Protection Areas of two mature trees.
D45	South of Gid Lane, Ryebridge Stream SU7703044164	Use existing gaps in hedge.	To avoid mature trees.
D46	Coldrey Farm, North of Froyle Road SU7796145439	Move order limits west to avoid woodland block which is a Priority Habitat.	To avoid Priority Habitat.
D47	West of Hole Lane SU7878646500	Locate haul road to use existing hedge gap.	To lessen impact on trees and scrub.
D48	North side of Dippenhall Lane, Crondall SU7555242409	Locate haul road to the west to use existing access.	To reduce impacts to woodland block which is Priority Habitat.
D49	River Wey SU7484541354 to SU7474541542	Extend trenchless to the south out Flood Zone 2 and Priority Habitats.	To avoid main river, Flood Zone 2 and Priority Habitats.



Ref.	Area/Location	Measure Description	Justification
D50	River Wey SU7488541283	Locate trenchless compound small distance to the north.	To avoid impact on public right of way (PRoW).
D51	Between Selbourne Lane and Caker Lane near solar farm SU7368138007	Move Order Limits to south and east.	To reduce impact on various Priority Habitats and Flood Zone 2.
D52	Green Lane, west of West Tisted. SU6406228940	Move Order Limits east to cross a field boundary through an existing gap.	To reduce the impact on large established trees.
Section D			
D53	Cron dall SU7980549073	Limit impacts through Cron dall with southern alignment.	To avoid social impact, Conservation Area, Priority Habitat and Flood Zone 2.
D57	Oak Park Golf Course, Cron dall SU8052148714	Revised potential route alignment several times.	To reduce the impact on playing areas, tee and avoid trees on golf course.
D58	South of A287 SU8061749680	Locate haul road to the west.	To avoid Ancient Woodland and SINC.
D59	Peacocks Nursery A287 SU8075450052	Use trenchless under A287, Nursery and woodland strip.	To avoid impacts to nursery business and the TPO mature tree belt.
D60	Bourley and Long Valley SSS/SPA SU8315153174	Use the existing track north of Aldershot Road rather than habitat area as haul road.	To lessen impacts on SPA, SSSI, Flood Zone and Priority Habitats.
D62	Eelmore Marsh SSSI SU8357153785	Locate Order Limits to the north – narrow the working width.	To ensure route is out of SSSI and unlikely to impact wetland.
D63	Cody Technology Park SU8400054063	Move Order Limits to the south – narrow working width.	To reduce requirement for tree removal.
D64	East of Cody Technology Park SU8489854678	Locate alignment to use former Southwood Golf Course.	To reduce the impact on road. This golf course is to be discontinued and developed into a Suitable Alternative Natural Greenspace (SANG).
D65	Naishes Lane, Ewshott, SU8139750605	Locally expand the Order Limits and LoD to the east of Pond 77.	To avoid Pond 77.
Section E			
D66	South of Cove Road SU8532955073	Move positioning to the west into the former Southwood golf course.	To reduce impact on SINC, Priority Habitats and Flood Zone 2.
D68	Frith Wood SU8909958085	Locate haul road to the east. Narrow working width.	To maintain the line of mature trees.
D69	Frith Wood SU8955358202	Use space within Frith Hill forestry road.	To reduce impacts on mature trees and the possible historic feature.
D74	Blackwater Valley SU8757757196	Two new alignments added along Ship Lane, Ringwood Road, the Blackwater Valley and	To avoid Henry Tyndale School and reduce impacts on Blackwater Valley.



Ref.	Area/Location	Measure Description	Justification
		across the SC Johnson site including a trenchless crossing.	
D78	Pine Ridge Golf Course, Frimley SU9045058459	Modify the Order Limits and LoD southwards to include the adjacent fairway.	To reduce the impact on trees and use of golf course.
Section F			
D79	Colony Bog and Bagshot SSSI/SPA SU9103859039	Locate compound in grassland area next to Maultway.	To avoid important heathland and woodland habitat
D80	Colony Bog and Bagshot SSSI/SPA Heathland SU9092259795 to SU9164760904	Use the existing Ministry of Defence track plus narrow working area.	To reduce the impact on the heathland habitat and mature trees.
D82	Colony Bog and Bagshot SSSI/SPA Wetland SU9209461119	Align the pipe on high ground to the north or lay in existing track.	To avoid impact on the wetland/bog SSSI.
D83	Colony Bog and Bagshot SSSI/SPA Wetland SU9277461503	Align the pipe for a short section along Red Road to further avoid wetland/bog.	To avoid the impact on wetland/bog SSSI.
D84	Colony Bog and Bagshot SSSI/SPA SU9380061676	Ensure trenchless working area for A322 is outside of SSSI/SPA.	To reduce the impact on the SSSI/SPA.
D87	West of Chobham SU9568562605	Move Order Limits south.	To reduce impact on polo fields and plant nursery.
D92	Steep Hill SU9668063360	Extend Order Limits to edge of field boundary just north of Steep Hill.	To provide adequate flexibility to route around planned sand school for horse riding activities.
Section G			
D93	River Thames crossing TQ0590666237	Add Option to the east through Chertsey Meads and then add trenchless crossing.	To avoid wetland Dumsey Meadows SSSI.
D94	M3 Crossing TQ0584867057	Adjustment to trenchless options from land north of B375 to north of M3.	To reduce the extent of excavation works within areas of landfill.
D95	M3 crossing TQ0587067093	Alternative trenchless alignment.	To avoid traveller site.
D96	Old Littleton Road TQ0583166991	Move Order Limits further west by 35m over a length of 200m.	To further reduce impacts to the traveller site.
D98	The River Bourne Crossing, Chertsey TQ0527566093	Use Trenchless crossing under the River Bourne.	To reduce ecological impact.
D100	Abbey Moor Golf Course, Chertsey TQ0448165673	Modify the Order Limits and LoD north towards the stream.	To reduce the impact on playing areas.
Section H			
D107	St James Senior Boy's School	Adjustment to Order Limits around school playing field.	To exclude tennis courts and lake banks from Order Limits.



Ref.	Area/Location	Measure Description	Justification
	TQ0669772147		
D108	St. James Senior Boy's School & Thomas Knyvett School TQ0659172148	Adjust Order Limits to reduce impact on St James Senior School buildings and provide flexibility on linking sub- options.	To reduce the impact on St. James Senior Boys' School & Thomas Knyvett School.

Table 1.3: Embedded Design Measures Since Scoping Stage

Ref.	Area/Location	Measure Description	Justification
Project Wide			
D1	N/A	Extend Order Limits at specific locations.	To allow for the provision of ecological mitigation.
D2	N/A	Extend Order Limits at specific locations.	To allow for tree planting to partly offset the envisaged loss of trees from the overall pipeline installation.
Section A			
NW1	Durley	Working width reduced to 15m and positioned towards the eastern half of the Order Limits to reduce impacts on purple moor grass and rush pasture Priority Habitat and to protect a line of trees which are of high value. Also use of ground protection. The approximate distance would be 150m. (Grid ref: SU5224616257 to SU5231416384). Turf would be stripped, stored and reinstated above the trench for an approximate distance of 35m between approximate grid references SU 52306 16340 to SU 52329 16365.	To reduce impacts on an area of purple moor grass and rush pasture priority habitat. Also to protect a line of trees which are of high value.
D10	Durley (location confidential)	Move Order Limits to the east after crossing Gregory Lane.	To avoid impacts to habitat for protected species, Potential Ancient Woodland under 2ha and Priority Habitat.
D11	South of Hinton Ampner (location confidential)	Move the sub-option Order Limits to the north of the woodland belt.	To avoid impacts to habitat for a protected species.
D14	Brookwood Copse SINC (Grid ref: SU 62302 26004)	Increase the order Limits to accommodate a trenchless crossing under SINC and to provide access tracks.	To avoid SINC, Potential Ancient Woodland under 2ha.
Section B			
D30a	Meon Valley Railway, north of Woodside Lane (SU 70106 35655)	Reduce working width through woodland belt.	To reduce impacts to Priority Habitat and visual impacts for users of PRoW.



Ref.	Area/Location	Measure Description	Justification
NW3	Farringdon	Working width reduced to 10m to reduce impacts on Priority Habitat and visual impacts for users of PROW over an approximate distance of 53m. (Grid ref: SU7009235638 to SU7013235673)	To reduce impacts on Priority Habitat and visual impacts for users of PROW.
Section C			
D35	Water Lane (location confidential)	Move Order Limits to the south to use existing farm access.	To reduce impacts to habitat for a protected species.
D36	Caker's Lane (Grid ref: SU 73962 38392)	Widen Order Limits to allow trenchless crossing.	To reduce disruption to traffic.
D37	Monks Wood SINC (Grid ref: SU 73812 39333)	Adjust the LoD to ensure pipe alignment is within the existing farm access.	To reduce impact to Potential Ancient Woodland under 2ha.
D38	West of Upper Froyle . (Grid ref: SU 75195 42039 to SU 75231 42090)	Reduce Order Limits and LoD.	To reduce impact to Potential Ancient Woodland under 2ha.
NW4 and NW5	North of Froyle	Working width reduced to 15m to reduce impacts on woodland and landscape within two areas with a combined approximate distance of 100m. (Grid ref SU7849946112 to SU7853046153 and SU7854846176 to SU7857846217)	To reduce loss of habitat north of Froyle and reduce the landscape effects of tree loss.
NW6	Dippenhall Road	Working width reduced to 15m to reduce impacts on Priority Habitat woodland with bat roost potential over an approximate distance of 55m (Grid ref:SU7876846475 to SU7879846520)	To reduce impacts on a woodland belt which is a Priority Habitat and has a number of mature trees offering potential bat roost habitat.
D54	South of Crondall (location confidential)	Move Order Limits further south.	To avoid impacts to habitat for a protected species.
D55	Between Dippenhall Road and Crondall (location confidential)	Widen the Order Limits and LoD.	To reduce impacts to habitat for a protected species.
Section D			
NW7	Oak Park, Crondall	Working width reduced to 15m to reduce impacts on woodland blocks within Oak Park golf course, some with bat roost potential and connection to	To reduce the impacts on two small woodland blocks with bat roost potential and which are connected to Ancient



Ref.	Area/Location	Measure Description	Justification
		Ancient Woodland. The approximate distance would be 305m. (Grid ref: SU8038548477 to SU8053248738)	Woodland. One is also a Priority Habitat.
D55a	North of Oak Park Golf Course (SU 80481 48720)	Reduce Order Limits and LoD through existing field access.	To reduce impacts to Potential Ancient Woodland under 2ha.
D56	Land north of Heath Lane (Grid ref: SU 80556 49011)	Widen the Order Limits and LoD.	To reduce impacts to mature trees in the woodland belt.
NW33	Ewshot Hill	Narrow working techniques to reduce impacts to Ancient Woodland at Ewshot Hill. Haul road and pipe installation to utilise an existing 5m gap between two areas of ancient woodland above a culvert. The approximate distance would be 10m (Grid ref: SU 80611 49673).	To reduce impacts to Ancient Woodland at Ewshot Hill (<2ha).
NW8	Naishes Lane	Working width reduced to 15m to reduce impacts on Ewshot Meadows SINC and SANG over an approximate distance of 356m. (Grid ref: SU8136950606 to SU8152950923)	To reduce impacts on Ewshot Meadows SINC and SANGs in the north where there are a number of mature trees, woodland, ponds and protected species.
NW9	South of Sandy Lane	Working width reduced to 15m to reduce impacts on TPOs within Wakefords Copse SINC over an approximate distance of 274m. (Grid ref: SU8177951385 to SU8201451476)	To reduce impacts on an area south of Sandy Lane protected by a TPO within a SINC. The area contains some trees with moderate bat roost potential.
D61	Bourley and Long Valley SPA/SSSI (Grid ref: SU 82931 53012)	Horizontal Directional Drilling (HDD) under wet heathland and wet woodland	To avoid impacts to protected habitats.
NW11 and NW13	Bourley and Long Valley SPA/SSSI	Working width reduced to limit impacts on trees and potential bat roosts within Bourley and Long Valley SSSI. Working specifications as detailed within Annex B of the Habitats Regulations Assessment (HRA). This consists of two areas with an approximate combined a distance of 293m. (Grid refs: SU8240152247 to SU8244952310, and SU8307353223 to SU8320053396)	To reduce impacts on landscape and ecology within Bourley and Long Valley SSSI. There are a number of trees with moderate bat roost potential in this SPA/SSSI area. This would limit the number of trees removed.



Ref.	Area/Location	Measure Description	Justification
NW12	Bourley and Long Valley SPA/SSSI	Working width reduced to 15m and positioned towards the western half of the Order Limits to reduce impacts to a recorded spring over an approximate distance of 47m. (Grid ref: SU8268552667 to SU8269352711)	To reduce impacts on an existing spring.
NW14	Basingstoke Canal	Working width reduced to 15m to reduce impacts on the Basingstoke Canal Conservation Area over an approximate distance of 135m. (Grid ref: SU8333653611 to SU8342953700)	To avoid impacts on mature trees within the Basingstoke Canal Conservation Area.
Section E			
NW15	Old Ively Road	Narrow working techniques to reduce impacts to Woodland along the Old Ively Road, with high and moderate potential for bat roosts. The approximate distance would be 470m. (Grid ref: SU8384753962 to SU8423654174)	To reduce the impacts on woodland in the Old Ively Road area which is Potential Ancient Woodland under 2ha. Several trees have high and moderate bat roost potential.
D70	South of Cove Brook (Grid ref: SU 85373 54934)	Locate compound to the south, out of Flood Storage Area.	To reduce risk of flooding.
NW16	Cove Brook	Working width reduced to 15m incorporating an existing track to reduce impacts on woodland near to Cove Brook; an area of high amenity and landscape value in an urban area. The area is also within the Cove Valley, Southern Grassland SINC with a number of trees with moderate bat roost potential. The approximate distance would be 317m. (Grid ref: SU8543455535 to SU8566455709)	To reduce impacts on woodland near to Cove Brook which has high amenity and landscape value in an urban area. A number of trees here have moderate bat roost potential and the area is a SINC and wet woodland Priority Habitat.
NW17	Queen Elizabeth Park	Working width reduced to 15m to reduce impacts on Queen Elizabeth Park, an area of high amenity, visual screening and landscape value within an urban area. Two trees with bat roost potential are also present in this location. The approximate distance would be 472m. (Grid ref: SU8654456032 to SU8694956192)	To reduce impacts on Queen Elizabeth Park, an area of high amenity and landscape value within an urban area. To also reduce impacts to trees with bat roost potential and retain the park's screening function for properties to the south.
D71	Farnborough Hill School (Grid ref: SU 87092 56214)	Widen the Order Limits to the north at trenchless location.	To allow flexibility to avoid mature trees with trenchless works.



Ref.	Area/Location	Measure Description	Justification
NW18	Farnborough Hill School/Ship Lane	Working width reduced to 15m to reduce the impact on adjacent trees and the Conservation Area at Farnborough Hill School over an approximate distance of 440m. (Grid ref: SU 87518 56460 to SU 87324 56789)	To reduce the impacts on trees within the Conservation Area at Farnborough Hill School.
NW19	SC Johnson	Working width reduced to 15m to reduce impacts to trees within the Surrey Heath TPO over an approximate distance of 545m. (Grid ref: SU8789857319 to SU8831757426)	To reduce impacts to trees within the Surrey Heath TPO zone.
D75	St Catherine's Road (Grid ref: SU 89052 57999 to SU 89073 57914)	Reduce Order Limits to width of the road.	To reduce impacts to mature trees.
D76	Balmoral Drive, west (location confidential))	Move the Order Limits north to exclude bank on southern verge.	To avoid impacts to habitat for a protected species.
D77	Balmoral Drive, east (Grid ref: SU 88678 57781 to SU 89065 57889)	Move Order Limits north into Balmoral Drive.	To reduce the impacts to residents in smaller adjacent roads.
NW20	Frith Hill	Narrow working techniques at Frith Hill to reduce impacts on mature trees, potential bat roosts and an historic embankment. The approximate distance would be 2.2km (Grid ref: SU8905558008 to SU9094458779)	To reduce impacts on a line of large mature trees at Frith Hill several of which have moderate bat roost potential.
Section F			
NW21	Adjacent to the Maultway	Working width reduced to limit impacts on mature screening trees along Maultway and also reduce impacts to Colony Bog and Bagshot Heath SSSI and potential bat roosts. Working specifications as detailed within Annex B of the HRA. The approximate distance would be 3.8km. (Grid ref: SU9097658802 to SU9252061386)	To reduce impacts on rows of large pine trees. These currently provide some screening from the road for houses west of Maultway within the and Colony Bog and Bagshot Heath SPA/SSSI. Trees here have been identified with moderate bat roost potential.
D85	Red Road. (Grid ref: SU 92836 61533 to SU 93046 61483)	Extend the length of pipeline installed in Red Road	To avoid installing in narrow path between residential areas.
NW22	Turf Hill	Working width reduced to 15m to reduce impacts to woodland at Turf Hill over an approximate distance of 888m. (Grid ref: SU9305161494 to SU9377561660)	To reduce impacts to woodland at Turf Hill.



Ref.	Area/Location	Measure Description	Justification
NW23 and NW24	Chobham Common SSSI/NNR	Working width reduced along and adjacent to the existing track to reduce impacts on Chobham Common SSSI/NNR. This heathland is protected for several species of reptile including the rare sand lizard. Working specifications as detailed within Annex B of the HRA. This would consist of two areas over a combined distance of 1.6km. (Grid ref: SU9691663545 to SU9776664071 and SU9826064307 to SU9878164515)	To reduce the loss of habitat within Chobham Common SPA/ SSSI/ NNR. This heathland is protected for several species of reptile including the rare sand lizard. Would reduce the necessity and depth of top soil stripping.
NW25	North-northeast of Chobham Common	Working width reduced to 15m to reduce impacts on large pine trees within Monk's Walk Site of Nature Conservation Importance (SNCI) which provide significant screening for the Longcross Estate. Potential bat roosts also present. The approximate distance would be 190m. (Grid ref: SU9903564666 to SU9913964823).	Reduces impacts on large pine trees north-northeast of Chobham Common with a high degree of local appeal. Trees in this location provide significant screening for the Longcross Estate. Also protects trees with high and medium bat roost potential in this area. This area is also designated as a SNCI.
D88	Accommodation Road (Grid ref: SU 99988 65173)	Trenchless crossing under Accommodation Road and adjacent trees.	To reduce landscape and visual impacts and impacts to trees with high bat potential.
D89	Foxhills Golf Course (Grid ref: TQ 00352 65325)	Adjust Order Limits locally to exclude pond.	To avoid direct impacts on a GCN breeding pond.
D89a	Foxhills Golf Course (Grid ref: TQ 00856 65459)	Adjust Order Limits to the north of woodland.	To avoid area of Potential Ancient Woodland under 2ha.
D90	Foxhills Golf Course (Grid ref: TQ 00116 65204 to TQ 01939 65252)	Reduce the working width to 15m through golf course.	To reduce impacts to GCN habitat, landscape and golf course use.
D90a	Longcross Road (Grid ref: TQ 01964 65316)	Use trenchless crossing of the road and adjacent woodland.	To avoid impacts to Potential Ancient Woodland under 2ha.
D91	Hardwick Lane (TQ 02166 65686 to TQ 02830 66044)	Move pipeline alignment to the north.	To reduce impacts to hedgerows, businesses and SNCI.
Section G			
D97	Pannels Farm (Grid ref: TQ 03493 65868 to	Move pipeline alignment to the south.	To reduce impacts to reptile habitat, trees with high bat roost potential, barn owl habitat and SNCI.



Ref.	Area/Location	Measure Description	Justification
	TQ 04202 65602)		
NW29	Chertsey Meads Local Nature Reserve	Working width reduced to 15m positioned towards the western half of the Order Limits and use of ground protection to reduce impacts to Chertsey Meads Local Nature Reserve. The approximate distance would be 720m. (Grid ref: TQ0562666084 to TQ0597266563). Turf would be stripped, stored and reinstated above the trench for an approximate distance of 125m between approximate grid references TQ 05958 66596 to TQ 05997 66480.	To reduce the impacts on the Chertsey Meads LNR, designated for its sensitive flora and habitats.
Section H			
D102	Brett Aggregates (Grid ref: TQ 05876 67355)	Widen the Order limits to allow greater flexibility for pipeline alignment.	To allow alignment to avoid Flood Alleviation structure.
D103	Littleton Lane (Grid ref: TQ 05946 67399 to TQ 05756 68410)	Move pipeline alignment to the west into farmland.	To reduce impacts to traffic movements and disturbance along Littleton Lane.
D104	Ashford Road (Grid ref: TQ 05548 69675)	Remove construction compound.	To reduce traffic impacts and disturbance to local residents.
NW30	Fordbridge Park	Narrow working techniques where possible to avoid or wherever possible limit the impacts on memorial trees at Fordbridge Park. The approximate distance would be 409m. (Grid ref: TQ0620670826 to TQ0588971060)	To avoid the loss of community value at Fordbridge Park.
D105	Laleham	Reduce the width of Order Limits.	To avoid an area of Ancient Woodland.
D106	St James Senior Boys' School (Grid ref: TQ 06611 72028 to TQ 06705 72159)	Adjust pipeline alignment to the east.	To avoid the disturbance of school activities.

References

Esso (2018). Southampton to London Pipeline Project: Scoping Report. Planning Inspectorate Reference Number EN070005. July 2018.