



Technical Note

Land at Whitehills Road, Loughton

21-007-002 Rev -

Habitats Regulations Site-Specific Assessment

July 2021

Rev	Issue Purpose	Author	Checked	Reviewed	Approved	Date
-	Planning	CG	AT	CG	SW	02/07/21

1 Introduction

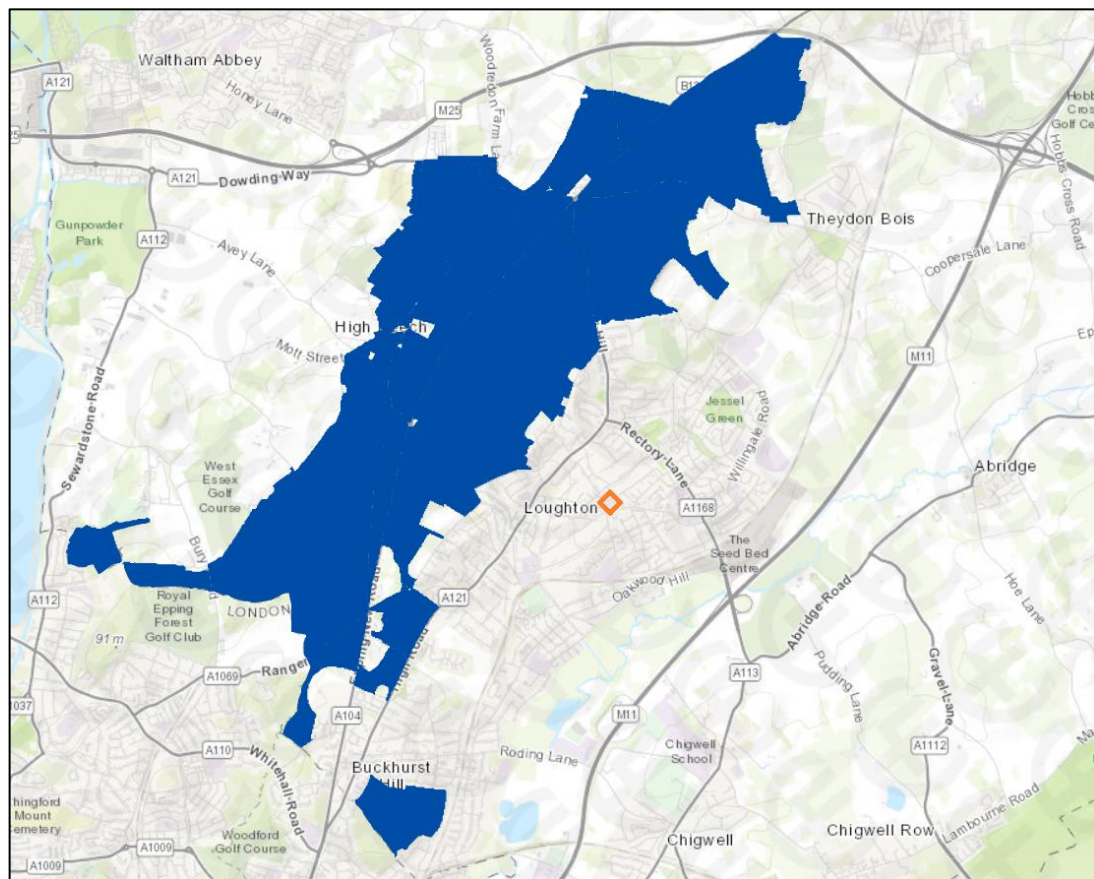
- 1.1.1 C&A Consulting Engineers have prepared this Habitats Regulations Site-Specific Assessment, relating to a planning application for land at Whitehills Road, Loughton (ref EPF/0507/21).
- 1.1.2 Epping Forest District Council (EFDC) is the local planning authority.
- 1.1.3 C&A previously prepared a Transport Statement (TS) for the application in February 2021.
- 1.1.4 EFDC subsequently requested further information relating to the Epping Forest Special Area of Consideration (EFSAC)¹, which is provided in this Technical Note.

¹ Epping Forest District Council <https://rds.eppingforestdc.gov.uk/documents/s99695/PLS-003%20App%202%20v2.pdf>

2 Traffic Assessment

- 2.1.1 Figure 2.1 is an extract from the EFDC Policies Map showing the boundary of the EFSAC, with the application site location.

Figure 2.1: EFSAC boundary and site location



- 2.1.2 The EFDC site-specific assessment process – Step 1 has been followed below.

Part (a) – Land use and quantum of the authorised existing use

- 2.1.3 As of February 2017, the existing site comprised 26 garages for nearby dwellings.
- 2.1.4 As set out in the TS, most garages are not used for vehicle parking. Therefore, the 26 garages were deemed to accommodate vehicles associated with 6 dwellings.

Part (b) – Calculation of the number of vehicle trips in Annual Average Daily Traffic (AADT) generated by the site under its existing use

- 2.1.5 In the TS, the TRICS database was used to assess the application. This shows that over the weekday 12-hour period from 0700 to 1900, the two-way vehicle flow would be 3.42 per dwelling, equivalent to 21 two-way vehicle movements for 6 dwellings.

- 2.1.6 There would be additional trips in the early morning and evening which are not covered by the 12-hour period. The Annual Average Daily Traffic (AADT) is estimated at 25% higher than the 12-hour flows.
- 2.1.7 Therefore, the AADT for 6 dwellings is estimated as 26, including zero heavy vehicles.
- 2.1.8 These trips have been distributed using Census data for the 'Epping Forest 012' MSOA and Google Maps peak hour driving routes. The distribution is shown in Appendix A and has been used to distribute the AADT in Table 2.1 below.

Table 2.1 – Existing AADT

Route	Trip distribution	Existing AADT	EFSAC Impact
A121 west inc M25	16.5%	4	Yes
A121 south	24.3%	6	Yes
M11 south	30.5%	8	No
Loughton local (east of A121)	8.0%	2	Yes
Epping Road	7.2%	2	Yes
Buckhurst Hill (Loughton Way)	7.5%	2	Yes
Theydon Bois (Pyrles Lane)	0.7%	0	Yes
Chigwell (Chigwell Lane)	5.4%	1	No
Total AADT	100.0%	26	
AADT impacting on EFSAC		16	

- 2.1.9 The table shows which of these routes pass through or within 200m of the EFSAC. The existing AADT which would impact on the EFSAC is 16 vehicles, including zero heavy vehicles.

Part (c) - Schedule of the land use and quantum proposed

- 2.1.10 The proposed development is 2 affordable houses with associated parking and landscaping.

Part (d) – Calculation of the forecast number of vehicle trips (AADT) generated by the site under its proposed use

- 2.1.11 Using the same data from TRICS, the two-way vehicle flow would be 3.42 per dwelling, equivalent to 7 two-way vehicle movements for 2 dwellings.
- 2.1.12 Again, there would be additional trips in the early morning and evening which are not covered by the 12-hour period. The AADT is estimated at 25% higher than the 12-hour flows.
- 2.1.13 Refuse collection would be part of existing EFDC rounds, so there would be no additional refuse vehicle trips as a result of the redevelopment.

- 2.1.14 Therefore, the AADT for 2 dwellings is estimated as 9, including zero heavy vehicles.
- 2.1.15 The same calculation has been used to distribute the forecast AADT in Table 2.1 below.

Table 2.2 – Forecast AADT

Route	Trip distribution	Forecast AADT	EFSAC Impact
A121 west inc M25	16.5%	1	Yes
A121 south	24.3%	2	Yes
M11 south	30.5%	3	No
Loughton local (east of A121)	8.0%	1	Yes
Epping Road	7.2%	1	Yes
Buckhurst Hill (Loughton Way)	7.5%	1	Yes
Theydon Bois (Pyrls Lane)	0.7%	0	Yes
Chigwell (Chigwell Lane)	5.4%	0	No
Total AADT	100.0%	9	
AADT impacting on EFSAC		6	

- 2.1.16 The forecast AADT which would impact on the EFSAC is 6 vehicles, including zero heavy vehicles.

Part (e) – Calculation of the net AADT figure

- 2.1.17 There would be a significant reduction in AADT of 17 vehicles as a result of the proposed redevelopment.
- 2.1.18 This would include a reduction in AADT of 10 vehicles impacting on the EFSAC.

Part (f) – Mitigation measures proposed

- 2.1.19 The layout includes secure cycle parking, to encourage residents to cycle for local trips instead of using cars.
- 2.1.20 Electric vehicle charging points may be installed at the dwellings. This would encourage residents to use zero emission vehicles, which would lead to a reduction in vehicle emissions to the air.

3 Summary

- 3.1.1 The proposed redevelopment of land at Whitehills Road, Loughton would reduce vehicle trips on the local highway network, including all routes which would impact on the Epping Forest Special Area of Consideration.
- 3.1.2 There would therefore be no adverse effect on the integrity of the EFSAC in relation to atmospheric pollution.

Appendix A Trip Distribution Calculations

WU03EW - Location of usual residence and place of work by method of travel to work (MSOA level)
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population units
date
method of travel to work

All usual residents aged 16 and over in employment the week before the census
Persons
2011
Driving a car or van

Districts with <5 trips excluded.
Routes are from Google Maps for 0800 weekday departure.

Place of work	Description	Usual Residence Epping Forest O12	
E02004527 : Epping Forest 001	North Weald, Matching & Sheering	8	0.5%
E02004528 : Epping Forest 002	Roydon, Lower Nazeing & Epping Green	2	0.1%
E02004529 : Epping Forest 003	Fyfield, High Ongar & Stapleford Abbotts	15	0.9%
E02004530 : Epping Forest 004	Chipping Ongar	7	0.4%
E02004531 : Epping Forest 005	Epping North	47	2.8%
E02004532 : Epping Forest 006	Epping South	16	0.9%
E02004533 : Epping Forest 007	Waltham Abbey North	5	0.3%
E02004534 : Epping Forest 008	Waltham Abbey South	13	0.8%
E02004535 : Epping Forest 009	Waltham Abbey West & Outer	31	1.8%
E02004536 : Epping Forest 010	Theydon Bois & Abridge	7	0.4%
E02004537 : Epping Forest 011	Loughton East (east of Rectory Lane)	96	5.7%
E02004538 : Epping Forest 012	Loughton North (Church Hill)	131	7.8%
E02004539 : Epping Forest 013	Loughton South (Oakwood Hill)	39	2.3%
E02004540 : Epping Forest 014	Loughton West (station and west)	62	3.7%
E02004541 : Epping Forest 015	Buckhurst Hill	65	3.9%
E02004542 : Epping Forest 016	Chigwell	30	1.8%
E02004543 : Epping Forest 017	Grange Hill	4	0.2%
Basilston		19	1.1%
Brentwood		19	1.1%
Broxbourne	Waltham Cross and Cheshunt	42	2.5%
Chelmsford		16	0.9%
East Hertfordshire	Bishops Stortford and Hertford	20	1.2%
Epping Forest	See MSOA above		
Harlow		57	3.4%
Hertsmere	Borehamwood and Potters Bar	10	0.6%
Stevenage		6	0.4%
Three Rivers	Rickmansworth and Chorleywood	5	0.3%
Thurrock		10	0.6%
Uttlesford	Stansted, Saffron Walden	11	0.7%
Welwyn Hatfield		12	0.7%
Barking and Dagenham		60	3.6%
Barnet		11	0.7%
Camden		20	1.2%
Enfield		49	2.9%
Greenwich		9	0.5%
Hackney		32	1.9%
Haringey		22	1.3%
Havering		63	3.7%
Islington		19	1.1%
Newham		85	5.0%
Redbridge		234	13.9%
Southwark		11	0.7%
Tower Hamlets		63	3.7%
Waltham Forest		160	9.5%
Westminster, City of London		43	2.6%
TOTAL		1,686	100%

Route split for each destination							
A121 west Inc M25	A121 south	M11 south	Loughton (east of A121)	Epping Road	Buck Hill (Loughton Way)	Theydon Bois (Pyrles Lane)	Chigwell / Abridge
						100%	
				100%			
							100%
				100%			100%
				100%			
100%							
100%							
100%							
						50%	50%
			100%				
	100%						
	50%				50%		
							100%
100%							100%
100%							
100%							
100%							
100%							
100%							
		100%					
		100%					
33.0%	33.3%				33.3%		
		100%					
		100%					
	33%	67%					
50%							50%
		100%					
		100%					
		67%			33%		
		100%					
		100%					
	100%						
		100%					

Split of the destination percentage (these total 100%)							
A121 west Inc M25	A121 south	M11 south	Loughton (east of A121)	Epping Road	Buck Hill (Loughton Way)	Theydon Bois (Pyrles Lane)	Chigwell / Abridge
0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.5%	0.0%
0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%
0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.9%
0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.4%
0.0%	0.0%	0.0%	0.0%	2.8%	0.0%	0.0%	0.0%
0.0%	0.0%	0.0%	0.0%	0.9%	0.0%	0.0%	0.0%
0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
0.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.2%	0.2%
0.0%	0.0%	0.0%	5.7%	0.0%	0.0%	0.0%	0.0%
0.0%	7.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
0.0%	0.0%	0.0%	2.3%	0.0%	0.0%	0.0%	0.0%
0.0%	3.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
0.0%	1.9%	0.0%	0.0%	0.0%	1.9%	0.0%	0.0%
0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.8%
0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.2%
1.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
2.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
0.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
0.0%	0.0%	0.0%	0.0%	3.4%	0.0%	0.0%	0.0%
0.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
0.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
0.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
0.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
0.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
0.0%	0.0%	3.6%	0.0%	0.0%	0.0%	0.0%	0.0%
0.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
0.0%	0.0%	1.2%	0.0%	0.0%	0.0%	0.0%	0.0%
1.0%	1.0%	0.0%	0.0%	0.0%	1.0%	0.0%	0.0%
0.0%	0.0%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%
0.0%	0.0%	1.9%	0.0%	0.0%	0.0%	0.0%	0.0%
0.0%	0.4%	0.9%	0.0%	0.0%	0.0%	0.0%	0.0%
1.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.9%
0.0%	0.0%	1.1%	0.0%	0.0%	0.0%	0.0%	0.0%
0.0%	0.0%	5.0%	0.0%	0.0%	0.0%	0.0%	0.0%
0.0%	0.0%	9.3%	0.0%	0.0%	4.6%	0.0%	0.0%
0.0%	0.0%	0.7%	0.0%	0.0%	0.0%	0.0%	0.0%
0.0%	0.0%	3.7%	0.0%	0.0%	0.0%	0.0%	0.0%
0.0%	9.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
0.0%	0.0%	2.6%	0.0%	0.0%	0.0%	0.0%	0.0%
16.5%	24.3%	30.5%	8.0%	7.2%	7.5%	0.7%	5.4%