



## **Thurrock Flexible Generation Plant**

**Environmental Statement Volume 4: Cumulative Effects Assessment  
Chapter 21: Land Use, Agriculture and Socio-Economics**

**Date:** February 2020

**Environmental Impact Assessment**

**Cumulative Effects Assessment**

**Volume 4**

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## Table of Contents

1. Introduction and Approach.....	1
1.1 Purpose of this chapter .....	1
1.2 Approach to cumulative assessment.....	1
1.3 Study area.....	1
1.4 Screening of cumulative developments.....	1
1.5 Identifying cumulative developments affecting each receptor .....	5
2. Assessment of Cumulative Effects .....	6
2.1 Construction phase of Thurrock Flexible Generation Plant.....	6
2.2 Decommissioning phase of Thurrock Flexible Generation Plant.....	7
2.3 Conclusions.....	8

## List of Tables

Table 1.1: Shortlist of relevant cumulative developments .....	2
Table 1.2: Summary of cumulative developments affecting each receptor (construction).....	5
Table 1.3: Summary of cumulative developments affecting each receptor (decommissioning) .	5

## 1. Introduction and Approach

### 1.1 Purpose of this chapter

1.1.1 This chapter of the Environmental Statement (ES) provides an assessment of the Land Use, Agriculture and Socio-economic effects of the proposed development in combination with other relevant future development projects that have been scoped into the cumulative assessment.

1.1.2 In particular, this cumulative effects assessment (CEA) topic chapter:

- identifies the potential impact interactions of the proposed development in combination with other relevant future development projects;
- identifies the receptors with the potential to be significantly affected by these potential impact interactions and characterises these receptors, including their sensitivity and any relevant environmental thresholds;
- evaluates the likely significant cumulative effects on these key receptors as a result of the proposed development in combination with other development projects;
- identifies any additional mitigation measures that are proposed to prevent, minimise, reduce or offset these significant cumulative effects; and
- taking into account any proposed mitigation measures, evaluates the significance of predicted residual cumulative effects.

### 1.2 Approach to cumulative assessment

1.2.1 The assessment of the Land Use, Agriculture and Socio-economic cumulative effects follows the approach set out in ES Volume 2, Chapter 4: EIA Methodology, Section 3.

### 1.3 Study area

1.3.1 The zone of influence (Zol) for land use and agriculture has been identified based on the spatial extent of likely effects. For this topic, the Zol equates to the study area for the assessment of effects on these resources as described in ES Volume 3, Chapter 8: Land Use, Agriculture and Socio-economics, together with any resources that link to them but are not directly affected by the project.

1.3.2 The socio-economic study area comprises the local authority area of Thurrock within which the development would be located.

### 1.4 Screening of cumulative developments

1.4.1 ES Volume 4, Chapter 18: Cumulative Effects Assessment Introduction and Screening identifies a short-list of potential cumulative developments that have been screened as potentially relevant to the CEA overall (i.e. for one or more topic areas). From this shortlist of cumulative development projects, Table 1.1 identifies those projects that fall within the zone of influence for Land Use, Agriculture and Socio-economics and have potential for cumulative effects that require assessment in this topic area.

1.4.2 Developments have been shortlisted in Table 1.1 where:

- the conclusions of the environmental assessments for those developments predicted significant effects on receptors within the zone of influence for the proposed Thurrock Flexible Generation Plant development; or
- where there is considered to be potential for effects that were not predicted to be significant for those individual developments but that may become significant in the cumulative scenario; or
- where environmental studies for those developments have not been published but there is sufficient information available about the development to both indicate the potential for cumulative effects and allow assessment.

1.4.3 Where sufficient information about a development to consider its potential for cumulative effects was not publicly available, the development has not been shortlisted.

**Table 1.1: Shortlist of relevant cumulative developments**

ID	Development	Potential cumulative impacts (construction)	Potential cumulative impacts (operation and maintenance)	Potential cumulative impacts (decommissioning)	Receptor(s) affected
011	Linford and East Tilbury residential expansion	<ul style="list-style-type: none"> <li>- Impacts on agricultural land classification including the permanent loss of agricultural land</li> <li>- Impacts on farm holdings</li> <li>- Generation of construction jobs and labour demand-</li> </ul>	No anticipated cumulative effects	Generation of decommissioning jobs and labour demand	Agricultural land Farm holdings Construction workforce
012	Linford and East Tilbury residential expansion	<ul style="list-style-type: none"> <li>- Impacts on agricultural land classification including the permanent loss of agricultural land</li> <li>- Impacts on farm holdings</li> <li>- Generation of construction jobs and labour demand</li> </ul>	No anticipated cumulative effects	Generation of decommissioning jobs and labour demand	Agricultural land Farm holdings Construction workforce
014	Outline application for proposed residential redevelopment, with all matters reserved apart from principle and access (Indicative layout provided indicates up to 203 dwellings)	<ul style="list-style-type: none"> <li>- Generation of construction jobs and labour demand</li> </ul>	No anticipated cumulative effects	Generation of decommissioning jobs and labour demand	Construction workforce
034	Outline application (with all matters reserved for a subsequent application) for proposed residential redevelopment of land between 39 and 41 St John's Road consisting of up to 43 dwellings, landscaping and new access.	<ul style="list-style-type: none"> <li>- Generation of construction jobs and labour demand</li> </ul>	No anticipated cumulative effects	Generation of decommissioning jobs and labour demand	Construction workforce
042	Tilbury2: A new port facility acting alongside the existing Port of Tilbury. This will involve the extension of existing jetty facilities and the dredging of berth pockets in the River Thames, and land works and facilities for: a "Roll-On / Roll-Off" (Ro-Ro) terminal for importing and exporting containers on road trailers; a facility for importing and processing bulk construction materials; and areas of external storage for a variety of goods such as imported cars.  The project also involves the construction of road and rail links to the site from adjacent networks.	<ul style="list-style-type: none"> <li>- Generation of construction jobs and labour demand</li> </ul>	No anticipated cumulative effects	Generation of decommissioning jobs and labour demand	Construction workforce
044	EIA screening request for the construction and operation of up to 32,160sqm of B8 storage and distribution space	<ul style="list-style-type: none"> <li>- Generation of construction jobs and labour demand</li> </ul>	No anticipated cumulative effects	Generation of decommissioning jobs and labour demand	Construction workforce

ID	Development	Potential cumulative impacts (construction)	Potential cumulative impacts (operation and maintenance)	Potential cumulative impacts (decommissioning)	Receptor(s) affected
045	EIA Screening Opinion in accordance with Regulation 6 of the Town and Country Planning (Environmental Impact Assessment) Regulations 2017 for the proposed development of 19,410 square metres (sqm) gross external area (GEA) of storage and distribution uses (Use Class B8) with 2,650sqm (GEA) of ancillary offices (Use Class B1), 695sqm (GEA) of welfare units (Use Class B8), 70sqm (GEA) of gatehouses (Use Class B8), a 100sqm (GEA) pump house and a 6,550sqm (GEA) car park, access, drainage, landsc...	- Generation of construction jobs and labour demand	No anticipated cumulative effects	Generation of decommissioning jobs and labour demand	Construction workforce
048	"Request for an EIA Scoping opinion. Redevelopment of the Site to provide a mixed-use scheme comprising of circa 2500 new homes plus community facilities, retail, food and drink, car parking and associated access arrangements, public realm works and environmental improvements. "	- Generation of construction jobs and labour demand	No anticipated cumulative effects	Generation of decommissioning jobs and labour demand	Construction workforce
057	Coldharbour Road, Northfleet Residential	- Impacts on agricultural land classification including the permanent loss of agricultural land - Impacts on farm holdings	No anticipated cumulative effects	Generation of decommissioning jobs and labour demand	Agricultural land Farm holdings
058	The Lower Thames Crossing, which will comprise a new road crossing connecting Essex and Kent, located east of Gravesend and Tilbury.	- Impacts on agricultural land classification including the permanent loss of agricultural land - Impacts on farm holdings - Impacts on areas of Access Land (common land) - Impacts on public rights of way and other linear routes	No anticipated cumulative effects	Generation of decommissioning jobs and labour demand	Agricultural land Farm holdings Access Land (common land) Public rights of way Other linear recreational routes Construction workforce
060	"Hybrid application for: up to 2,158 dwellings); a serviced plot for a new primary / nursery school up to 1,850 sq.m; a health centre up to 1,000 sq.m (Use Class D1); community pavilion of up to 500 sq.m (Use Class D1); convenience retail store up to 400 sq.m (Use Class A1); public art together with associated vehicle parking, open space, landscape and public realm provision, ecological mitigation, highways, pedestrian and vehicular access routes, and other associated engineering, utilities and infrastructure works.	- Generation of construction jobs and labour demand	No anticipated cumulative effects	Generation of decommissioning jobs and labour demand	Construction workforce
063	Outline planning permission with all matters (except for access) reserved for the mixed use redevelopment of Coryton Oil Refinery.	- Generation of construction jobs and labour demand	No anticipated cumulative effects	Generation of decommissioning jobs and labour demand	Construction workforce

ID	Development	Potential cumulative impacts (construction)	Potential cumulative impacts (operation and maintenance)	Potential cumulative impacts (decommissioning)	Receptor(s) affected
076	Request for Environmental Impact Assessment (EIA) Screening Opinion: Proposed development of c.600 dwellings and associated in infrastructure, including access and relief road.	- Generation of construction jobs and labour demand	No anticipated cumulative effects	Generation of decommissioning jobs and labour demand	Construction workforce
078	Request for Environmental Impact Assessment (EIA) Screening Opinion and Outline Application - Proposed construction of up to 161 new dwellings (C3) with vehicular access from Churchill Road; construction of 7,650 sqm (GEA) of flexible employment floorspace (B1c/B2/B8) with vehicular access from Thurrock Park Way; provision of open space including landscaping and drainage measures; new pedestrian/cycle links; and associated parking and access.	- Generation of construction jobs and labour demand	No anticipated cumulative effects	Generation of decommissioning jobs and labour demand	Construction workforce
079	Proposed Short Term Operation Reserve (STOR) electricity generating station comprising 14 no. gas-fired generators with a capacity up to 21 MW with associated development at land adjacent to Tilbury Waste Water Treatment Works, Fort Road, Tilbury.	- Generation of construction jobs and labour demand	No anticipated cumulative effects	Generation of decommissioning jobs and labour demand	Construction workforce
080	Mixed-use redevelopment of and East Of Caspian Way And North And South Of London Road Purfleet Essex	- Generation of construction jobs and labour demand	No anticipated cumulative effects	Generation of decommissioning jobs and labour demand	Construction workforce
081	Tilbury Green Power Phase 2 S36C application. Biomass and energy from waste fuelled generation station at Tilbury Docks, Essex: variation application under section 36c of the electricity act 1989.	- Generation of construction jobs and labour demand	No anticipated cumulative effects	Generation of decommissioning jobs and labour demand	Construction workforce
082	Gateway Energy Centre: Development up to 1250 MW capacity to comprise either: up to two CCGT units; or one CCGT unit and one or more OCGT units and/or battery energy storage	- Generation of construction jobs and labour demand	No anticipated cumulative effects	Generation of decommissioning jobs and labour demand	Construction workforce
084	Application to alter phasing of restoration under planning permission ref 17/00412/FUL for the re-profiling of the site to 9 metres AOD using inert reclamation material imported by river, in place of Pulverised Fuel Ash from the adjacent now redundant Tilbury Power Station.	- Impacts on public rights of way and other linear routes	No anticipated cumulative effects	Generation of decommissioning jobs and labour demand	Public rights of way Other linear recreational routes Construction workforce

## 1.5 Identifying cumulative developments affecting each receptor

- 1.5.1 Table 1.2 and Table 1.3 summarises the cumulative developments that have the potential to cause cumulative effects at each identified receptor, the sensitivity of that receptor to cumulative impacts, and the starting position to the cumulative effects assessment, which is the predicted residual effect of Thurrock Flexible Generation Plant alone during construction, operation and decommissioning (as established in ES Volume 3).
- 1.5.2 The potential for cumulative effects on agricultural and recreational resources would only occur during construction as this is the stage at which all mitigation measures would be put in place. Following the completion of construction and mitigation works there would be no further effects on these resources.
- 1.5.3 As set out in Volume 3, Chapter 8, socio-economic impacts of employment during operation have been scoped out of the assessment as having no potential for significance, given the very small operational workforce of Thurrock Flexible Generation Plant. There is considered to be no potential for significant cumulative socio-economic effects in operation.

**Table 1.2: Summary of cumulative developments affecting each receptor (construction)**

Receptor affected	Sensitivity of receptor to cumulative effects	Standalone effect of Thurrock Flexible Generation Plant on receptor	Cumulative development(s) with the potential to affect this receptor
Agricultural land classification	Medium	Moderate adverse (not significant)	011/012/057/058
Farm holdings	Medium	Negligible	011/012/057/058
Access land (common land)	Medium	Minor beneficial	058
Public rights of way and/or other linear routes	Low to medium	Minor adverse	058 and 084
Socio-economics	Low to medium	Minor to moderate beneficial	011, 012, 014,034, 042,044, 045, 048,057, 058, 060, 063,076, 078, 079, 080, 081, 082,084

**Table 1.3: Summary of cumulative developments affecting each receptor (decommissioning)**

Receptor affected	Sensitivity of receptor to cumulative effects	Standalone effect of Thurrock Flexible Generation Plant on receptor	Cumulative development(s) with the potential to affect this receptor
Socio-economics	Medium	Minor to moderate beneficial	011, 012, 014,034, 042,044, 045, 048,057, 058, 060, 063,076, 078, 079, 080, 081, 082,084



## 2. Assessment of Cumulative Effects

### 2.1 Construction phase of Thurrock Flexible Generation Plant

#### Assessment of effects

##### *Agricultural land classification*

2.1.1 The proposed Lower Thames Crossing (058) would affect large swathes of agricultural land and would be likely to include areas of the best and most versatile Grades 2 and 3a agricultural land which be considered to be of high to very high sensitivity. The residential areas at Linford (011 and 012) are also likely to comprise higher quality Grade 2 and 3a land, as indicated by land already surveyed in detail by DEFRA in the vicinity. Similarly, the residential site at Northfleet (057) has previously been surveyed by DEFRA and has shown the site to comprise predominantly Grade 2 agricultural land. The permanent loss of land associated with Thurrock Flexible Generation Plant which affects only lower quality Subgrade 3b land and would therefore have no cumulative effects with this scheme.

##### *Farm holdings*

2.1.2 In terms of farm holdings, the Lower Thames Crossing project (058), as a linear scheme, would be likely to impact the largest number of holdings through severance and land take, including land within the holdings affected by this scheme. The development of the residential sites at Linford (011 and 012) and Northfleet (057) would be likely to affect areas of arable agricultural land use, although the details of the individual land holdings affected is unknown. The effect on the two large farm holdings associated with Thurrock Flexible Generation Plant is negligible and any potential cumulative effects on the farms would be likely to be associated with the development of other proposals in the vicinity, including the Thames Crossing, to which the effect of Thurrock Flexible Generation Plant would make no material contribution.

##### *Access Land (Common Land)*

2.1.3 The proposed development boundary for the Lower Thames Crossing as set out in the 2018 PEIR would have permanent impacts on common land parcel CL411 (Tilbury Green) as a result of the proposed new junction to the east of Tilbury, which would be located over the majority of Tilbury Green. Common land is designated as 'Access Land' under the provisions of the Countryside and Rights of Way Act 2000, which provides a public right of access on foot. This impact is not described in the PEIR, although the impact on public footpath FP200, which runs within this strip of common land, is shown on Figure 14.2 and described in Chapter 14 of the PEIR.

2.1.4 In Chapter 14 of the PEIR it states that "Other areas of Open Access Land within 500m of the Development Boundary comprises The Green, Hall Hill, Fort Road, Parsonage, Walton and Tilbury Fort Common Land. Tilbury Fort Common Land is located to the north of the Project, immediately to the north of Tilbury Fort and Tilbury Power Station. The proposed route passes 0.4km to the east" [paragraph 14.4.77]. Specifically, the development boundary encroaches into the eastern part of Walton Common and also the norther tip of the strip off common land between Walton Common and the railway line. These potential impacts are not described.

2.1.5 Notwithstanding these potential impacts, under the Commons Act 2006, replacement land would be required to compensate for any loss of common land resulting from the project to ensure that there is no net reduction in the area of this resource. Therefore, it is not anticipated that there would be a significant adverse cumulative effect on common land arising from the Thurrock FGP and the Lower Thames Crossing.

##### *Public Rights of Way and/or other linear recreational routes*

##### Lower Thames Crossing

2.1.6 The proposed development boundary and temporary areas required during construction of the Lower Thames Crossing also impact upon public rights of way and cycle routes as follows:

- Whilst the tunnels will pass under the Thames Estuary Path and National Cycle Route 13, the construction areas adjacent to the river have the potential to have a temporary impact upon the amenity of these resources.
- In addition to Tilbury Green common land, the northern section of public footpath FP200 would also be located within the proposed new Tilbury Junction.

2.1.7 The PEIR sets out measures that would be adopted to mitigate for these effects including:

- The provision of a suitable permanent diversion where the proposed development affects an existing public rights of way to ensure that the route remains open; and
- The provision of temporary diversions together with appropriate signage during construction, carried out in consultation with the local highways authority and other interested stakeholders to minimise disruption to NMU routes, including PRoW, cycle routes and National Trails.
- The use of well-designed construction hoarding to the perimeter of local compounds and work areas and activities which lie immediately adjacent to key sensitive visual receptors.

2.1.8 Therefore, it is not anticipated that there would be a significant adverse cumulative effect on public rights of way and cycle routes arising from the Thurrock FGP and the Lower Thames Crossing.

Restoration of land at Ash Fields

2.1.9 The Initial Restoration Plan submitted under Condition 11 of the planning permission (Application Ref: 17/00412/FUL) includes the indicative route of the new public right of way on land adjacent to the Thurrock Flexible Generation Plant site. The accompanying statement on Ash Fields states that the agreed date for the completion of restoration on Ash Fields South (owned by RWE) is 2021 for the western area and 2023 for the whole site.

2.1.10 An aspirational landscape master plan has also been prepared for the whole of the Tilbury Riverside site which includes this proposed new footpath to be located within the proposed green corridor network and providing a link between the existing Two Forts Way riverside path (the Thames Estuary Path) and Walton and Parsonage Commons, with onward links via Cooper Shaw Road to public footpaths to West Tilbury.

2.1.11 It is proposed that Walton Common is deregistered to accommodate the main development area for the Thurrock Flexible Generation Plant, in which case this proposed new footpath link would no longer be able to link with an area of common land, although there is the potential for it to be realigned within the wider Tilbury Riverside site. However, the potential benefits to wider public access would be lost.

2.1.12 There is the potential therefore for a minor adverse cumulative effect as pedestrians would have to access areas of Access Land and the wider public rights of way network by following the Thames Estuary Path westwards to Tilbury Fort and then follow the footpath north to Tilbury Fort Common and Fort Road, which is a longer route and requires walking alongside Fort Road. However, in the context of recreational routes available in the area and the new Common Land and connectivity to be provided by Thurrock Flexible Generation Plant, this is not considered to be a significant adverse effect.

**Construction employment**

2.1.13 Whilst the additional construction employment associated with these proposed developments would contribute to a beneficial effect in terms of the economy, the possibility of any of these sites being developed at the same time as the Thurrock Flexible Generating Plant raises the possibility of an increased demand for construction labour, thus causing delay to projects and increasing cost. Construction demand for this project is likely to be lower relative to these other schemes.

2.1.14 Of the NSIP schemes with substantial construction labour demands, whilst only Tilbury2 is likely to be developed ahead of the Flexible Generation Plant, even where there is some overlap in timeframes between the Flexible Generation Plant and other proposed development, it is considered that the relatively lower construction demands, the pool of local and regional construction labour and the mobility of the construction workforce are such that the effect on the availability of labour would be negligible and not significant.

**Further mitigation or enhancement**

2.1.15 No further mitigation or enhancement is required.

**Residual effects**

2.1.16 No significant cumulative effects are predicted.

**2.2 Decommissioning phase of Thurrock Flexible Generation Plant**

**Assessment of effects**

*Socio-economics*

2.2.1 The schemes identified will have differing or unlimited lifespans and their decommissioning and/or demolition in due course would have varied requirements for labour and skills. As with the construction phase, before a project has gone out to tender, it is not possible to know with certainty the level of employment that would be generated during decommissioning.

2.2.2 Given these variables, it is unlikely decommissioning or demolition activities will take place at the same time and require the same skills and labour as Thurrock Flexible Generation Plant. Taking into account likely future levels of economically active people in the study area (assuming similar to today) and the variety of skills in the labour pool, it is considered that the cumulative impact of the decommissioning/demolition would be negligible in relation to socio-economic baseline conditions.

**Further mitigation or enhancement**

2.2.3 No further mitigation or enhancement is required.

**Residual effects**

2.2.4 No significant cumulative effects are predicted.

## 2.3 Conclusions

- 2.3.1 Potential cumulative effects on agricultural land, farm holdings, common land, recreational resources and the socio-economic effect of construction or decommissioning labour demand have been assessed.
- 2.3.2 Thurrock Flexible Generation Plant would make no material contribution to loss of best and most versatile agricultural land or farm holdings, and no significant cumulative effect with other developments is predicted.
- 2.3.3 Under the Commons Act 2006, replacement land would be required to compensate for any loss of common land resulting from cumulative developments and therefore no adverse cumulative effect would occur.
- 2.3.4 There is the potential therefore for a minor adverse cumulative effect in the future as Thurrock Flexible Generation Plant would remove Walton Common as a destination for a consented footpath from the Thames Estuary Path To Walton Common that is scheduled to be delivered once land raising and landscape restoration at the ash fields site are completed. However, in the context of recreational routes available in the area and the new Common Land and connectivity to be provided by Thurrock Flexible Generation Plant, this is not considered to be a significant adverse effect.
- 2.3.5 With regard to labour demand in construction and decommissioning, it is considered that the pool of local and regional construction labour and the mobility of the construction workforce are such that the cumulative effect on the availability of labour would be negligible. Thurrock Flexible Generation Plant would have no material labour demand with potential for significant cumulative effects in operation.