

## Environmental and Social Data Sheet

### Overview

Project Name:	Thames Water Climate Action
Project Number:	2011 0483
Country:	United Kingdom
Project Description:	The Project consists in an EIB loan for up to GBP 430m in favour of Thames Water Utilities Ltd, a UK regulated utility, for the purpose of financing its investment programme 2012-15, with a specific focus on the climate action-related components.
EIA required:	yes
Project included in Carbon Footprint Exercise <sup>1</sup> :	no

(details for projects included are provided in section: “EIB Carbon Footprint Exercise”)

### Summary of Environmental and Social Assessment, including key issues and overall conclusion and recommendation

The Programme is strongly environmentally driven and therefore has predominantly positive effects on the environment. In particular, the Bank has identified as eligible for funding, those projects within the AMP5 programme (2010-2015) that are driven by climate change mitigation and adaptation considerations. A large part of these measures also contribute towards ensuring compliance with EU environmental directives, including the Urban Wastewater Treatment Directive and the Water Framework Directive. The main project is the Lee Tunnel, and is intended to reduce a large proportion of the combined sewer overflows that frequently pollute the Thames River when increasingly intense rainfall events cause sewer and sewage treatment capacities to be exceeded.

The promoter complies with the requirements of EU EIA Directive 2011/92/EU, as well as Article 6 of the Habitats Directive 92/43/EEC. A dedicated “Environmental Team” carries out environmental screening procedures for all capital projects in order to identify environmental constraints and required regulatory consents. Environmental Impact Assessment procedures and appropriate assessments for impacts on Natura2000 sites are carried out where required by the competent authorities and mitigating measures are applied as appropriate. The promoter has set itself ambitious environmental targets for the future, including the reduction of greenhouse gas emissions by 20 per cent, compared to 1990 levels, by 2015.

An SEA, covering the major AMP5 project components was carried as part of its statutory Water Resources Management Plan and the Drought Plan. The Lee tunnel and the Beckton Sewage Treatment Works Extension underwent an Environmental Impact Assessment in 2008, with mitigating measures prescribed predominantly for during the construction phase. The Lee Tunnel project was assessed for environmental impacts and no Habitat Regulation issues were found. The Thermal Hydrolysis Processes and flood resilience projects were not subject to EIA’s but the Walthamstow flood resilience storage reservoirs (Lockwood, High Maynard, No 4, No 5, Warwick east and west), are Natura2000 sites and will undergo appropriate assessments. The metering roll-out is not expected to have any impacts on Natura2000 sites.

<sup>1</sup> Only projects that meet the scope of the Pilot Exercise, as defined in the EIB draft Carbon Footprint Methodologies, are included, provided estimated emissions exceed the methodology thresholds: above 100,000 tons CO<sub>2</sub>e/year absolute (gross) or 20,000 tons CO<sub>2</sub>e/year relative (net) – both increases and savings.

As not all project components are fully “permitted”, the usual undertaking will be included, namely: The Promoter shall not commit any EIB funds against schemes that require an EIA according to EU and national law without, prior to commitment, submitting the EIA and the non-technical summary of the EIA to the Bank for review and publication on the Bank’s website. The promoter shall not commit any EIB funds against any scheme without receiving consent from the competent authority regarding the Habitats directive and submitting the relevant forms to the Bank prior to the commitment of EIB funds. The project is as such, acceptable for Bank financing.

## **Environmental and Social Assessment**

The quality regulators determine the framework for environmental investments for each regulatory period and the companies propose on this basis, a set of necessary environmental investments. Each environmental investment proposal is then reviewed by an independent consultant appointed by OFWAT before being approved and taken up into the investment programme.

Where a project requires planning permission and the project could impact on a Natura2000 site an Appropriate Assessment is required under the Conservation of Habitats and Species Regulations 2010. These regulations are the principal means by which the Habitats Directive is transposed in England and Wales. The Appropriate Assessment considers whether the project will adversely affect the integrity of the Natura2000 site and informs the planning decision.

Where a project requires an environmental permit or licence to operate the regulator (Environment Agency) will consider its potential impact on any European protected sites, to comply with the Environmental Permitting Regulations (England and Wales) 2010. The Regulator will ensure that any permission they grant will not have a harmful effect on wildlife and would include conditions in a permit to avoid adverse effects on any European site, over and above those to ensure compliance with the permit regulation. The regulator will also take into account any Environmental Impact Assessments that may be required for a planning application in their permit determination.

Approximately 50% of the water in the Thames is actually treated effluent and strict standards for effluent therefore apply. Upgrades to the large London sewage treatment works and increasing the associated sewer capacity will improve effluent quality, respectively reduce the overflow of raw sewage into the Thames during storm conditions. This avoids de-oxygenation of the tidal river and hence reduces fish kills, dispersed methane emissions from anaerobic decomposition of organic waste and other environmental damage. Full EIAs were carried out for the Lee Tunnel and the downstream Beckton Sewage Treatment Plant upgrade.

Fitting out the existing wastewater treatment plants with Thermal Hydrolysis Plants (THP)’s - essentially a pre-digestion stage that makes subsequent digestion more efficient - enhances the quantity of gas generated and in so doing, reduces the solids that remain for recycling. The process also reduces odour problems and enables cessation of liming, which although compliant with regulatory requirements, produces a sludge that is unpleasant to handle and can cause stakeholder complaints due to odour. Operating permits are expected to be required for the THP’s.

Flood resilience measures include the raising of vulnerable assets such as control and electrical equipment, provision of bunds and chamber walls to prevent flood water entering tanks (e.g. Kempton WTW), and sealing of buildings. Basements will be sealed at some sites including Walton WTW, Ashford Common WTW and Kempton Park WTW. The basement sump pump facilities will be improved where necessary. At Ashford Common WTW the road drainage will be improved to direct surface flood water away from the vulnerable buildings and plant.

Both THP and Flood resilience projects would need to be screened for any impacts on Natura2000 sites or relevance to the Habitat Regulations. Of the sites listed the Walthamstow storage reservoirs (Lockwood, High Maynard, No 4, No 5, Warwick east and west), are Natura2000 sites.

Installation of customer meters will incentivise water saving, meaning that more water remains available during periods of drought, relieving also pressure on river flows that might even cease in dry periods. This measure is not anticipated to require EIA's or other environmental permitting.

Overall the project has predominantly got climate change adaptation components (Lee tunnel, flood protection measures and meter installation) but also climate change mitigation measures (THP). These measures are consistent with the Climate Change Act 2008 and TW's own Climate Change Policy, reflecting the vulnerability of the water and sanitation sector to the effects of climate change.

In terms of reducing its contribution to the causes of climate change TW has set a challenging goal to work towards reducing its greenhouse gas emissions (carbon dioxide equivalent, 'CO<sub>2</sub>e') by 20% compared to 1990 levels by 2015 for scope 1 and 2 emissions. Currently it has achieved a 16% reduction and is expected to surpass the target. The year 2011/2012 shows net operational emissions of 741 ktCO<sub>2</sub>e equalling an approximate 4.5% emissions reduction over 2010/2011. Half this reduction has been delivered through actions within the control of Thames Water and is in line with the company target of a 3% per year reduction.

## **EIB Carbon Footprint Exercise**

Given that the baseline case, being defined as "the expected alternative means to meet the same output supplied by the proposed project" – i.e. in the case of the Lee project no other expected alternative - , this project does not provide a sufficient additional saving compared to the baseline to surpass the 20kt savings relevance thresholds. In terms of absolute emissions, part of the emissions reductions from the captured methane from the sewage collected by the Lee tunnel and the additional methane produced by the THP systems are offset by the energy required to drain the Lee tunnel, meaning that also in terms of (net) absolute footprint the project falls below the 100kt relevance threshold.