



LTC Mitigation Benefits

An Executive Summary by Hatch
October 2020

Executive Summary

- i. Hatch were commissioned by Thurrock Council to undertake an assessment of the local economic and social costs of the Lower Thames Crossing (LTC) scheme. The initial findings were presented within the 'LTC Economic Cost Study' (February 2020).
- ii. Hatch have subsequently worked with the Council to produce an overall package of schemes and interventions that are considered to adequately offset the identified economic and social costs of the LTC Scheme within Thurrock.

Identified Cost Impacts of LTC Scheme

- iii. The LTC Economic Cost Study identified a range of key impacts of the LTC Scheme within Thurrock, as summarised within the graphic below.

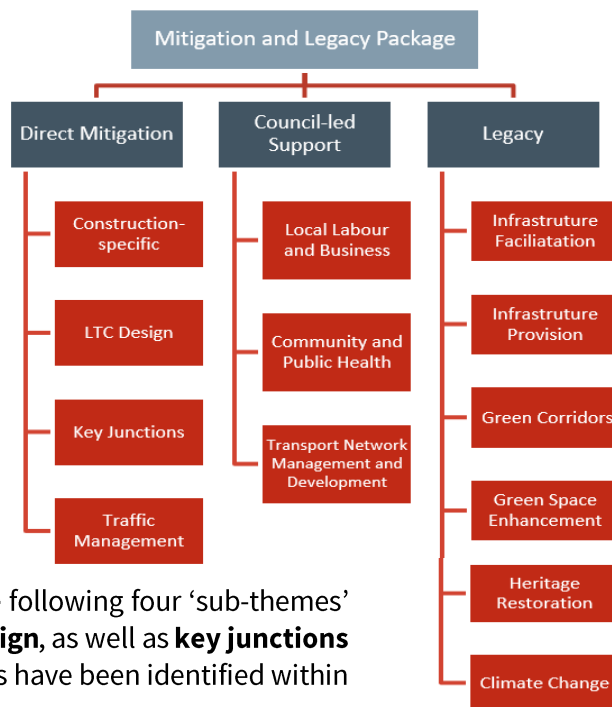
Business & Economy Impact	Estimated Cost	Community Impact	Estimated Cost
Commercial Assets / Land Value Lost	c. £4 million	Loss of residential properties	£3.1 million
Business disruption during construction	up to c. £39 million	Residential property blight	£25.4 million
On-going Business Performance	up to c. £18 million	Impact on community facilities	Moderate adverse
Attractiveness to investors	Minor to Moderate Adverse	PRoW severance/disruption	Moderate adverse
Environment Impact	Estimated Cost	Community disruption	Moderate adverse (up to £36 million transport impacts)
Amenity land value lost	£1.35 million	Impact on community cohesion	Moderate adverse (up to £21 million transport impacts)
Habitat lost/damaged	Minor to moderate adverse	Health & Wellbeing	Moderate adverse
Heritage impact	Moderate adverse	Growth Impact	Economic Cost
Flood risk	Negligible to minor adverse	Land permanently lost	up to £88 million
Visual impacts	Moderate adverse	Land delayed	up to £29 million
Local air quality and emissions	Moderate adverse	Land blighted	up to 41 million
Increase in noise	Moderate to Major adverse		

- iv. This includes significant **direct loss of land** (up to £96 million), **disruption to access and movement** during construction (up to £104 million), and will **create blight across the corridor** (up to £67 million), and have **on-going negative impacts** upon business and the local community (up to £39 million).
- v. Given all of the costs identified, the Council's position on the LTC Scheme is that the current scheme configuration will negatively affect the Thurrock area as it:
 - It **does not meet several national and Highways England strategic policy tests and scheme objectives**, including the delivery of economic growth and achieving sustainable local growth within the Thurrock area.
 - It is **inconsistent with the housing and development potential** for Thurrock
 - It will **provide limited additional connectivity for residents and businesses of Thurrock.**
 - Throughout the construction phase there will be **considerable disruption of local roads and Public Rights of Way** across Thurrock. This will affect access to employment, education, health facilities and local services, as well as delay development opportunities.
- vi. A number of other technical and community significant objections have been raised within the three formal consultation Council responses, in a range of formal correspondence and in response to a range of draft technical documents, which all contribute to the over-riding need for additional mitigation and legacy measures to those currently proposed.

Mitigation and Legacy Measures

vii. An iterative package development process has been undertaken that has led to the creation of a preferred package of 55 measures. These are classified within three overarching ‘themes’:

- **Direct Mitigation:** measures that address the direct impact of the construction phase, as well as design of the LTC scheme and the resulting traffic and transport implications
- **Council-led Support:** measures that ensure sufficient local resource is available to support local businesses and communities throughout the construction phase and into the transition of the operating scheme
- **Legacy:** measures that will ensure the LTC scheme delivers a lasting legacy across Thurrock and ensure positive local outcomes



Direct Mitigation Measures

viii. The measures have been categorised within the following four ‘sub-themes’ relating to **impact of construction**, the **LTC Design**, as well as **key junctions** and **traffic management**. A total of 22 measures have been identified within this ‘theme’ and are summarised below:

Ref.	Scheme Measure	Brief Description
Construction-specific (emissions and transport)		
M1	Ensure optimum phasing of construction	Ensure the construction operations cause the minimum level of disruption by phasing activities.
M2	Reduce the number and/or optimise the location of construction compounds	Ensure the construction operations cause the minimum level of disruption by locating compound sites away from properties and sensitive receptors
M3*	Minimise construction and construction traffic emissions	Ensure best practice approaches are adopted in relation to dust and emissions.
M4	Real-time air quality and noise monitoring at key receptor sites	Install sensors to monitor air quality and noise, with required actions if target limits are exceeded.
M5*	Alter construction hours to reduce noise and disruption in residential areas	Minimum the level of disruption by only applying appropriate on-site working hours
M6	Additional noise mitigation in Chadwell and East Tilbury	Current levels of proposed mitigation are considered insufficient in these sensitive locations.
M7	Sustainable public transport access to construction sites	Provide an electric shuttle bus between the new interchange at Stanford-le-Hope station and the main construction compounds
M8	Implement innovative public transport measures	Use the construction phase as an opportunity to trial innovative forms of public transport measures.
M9	Enable active travel to construction sites	Ensure construction workers can access construction compounds via active travel modes.
M10	Use of marine transport for the movement of materials	Use of river transport to move materials and construction equipment to and from site during the construction phase
M11	Adequate waste management processes	Ensure clear waste management processes and mitigation measures during construction (coded bins, appropriate training)

LTC Design Elements		
M12	Smart speed limits that can respond to traffic flows and pollutant concentrations	Ensure that the smart and variable speed limits can be utilised to respond to real-time air quality monitoring data and slow traffic during periods of higher pollution
M13	Use of low-noise road surfacing on the LTC and the local network	As well as utilising low-noise surfacing along the LTC, this surfacing should also be applied on local roads to help off-set the overall level of noise generated from the scheme
M14	Use of best-in-class energy efficient systems for operations	Whilst HE will adopt modern lighting and signage, it is important to confirm that best-in-class energy efficiency is being provided.
M15	Build sufficient earth bunds and noise barriers along the route to reduce noise impact	Whilst landscaping and noise barrier measures are already proposed, it is important to confirm that sufficient provision is being made across the full alignment
M16	Flood risk mitigation and water quality improvement through SuDS	Greater emphasis should be made on the use of SuDS features within the scheme to deliver water quality benefits
M17 *	Revised Proposals for A13/LTC Junction	Alternative proposals to minimise the extensive land sterilisation, property demolition and blight creating by the existing proposals
Key Junctions and Traffic Mitigation		
M18 *	Orsett Cock Roundabout Mitigation	Additional mitigation to negate the negative impact of the LTC scheme upon the A128 approach to the junction.
M19 *	Manorway Roundabout Mitigation	Additional lane capacity on the A1014 and A1013 approaches to ensure port and local traffic movements are not impaired by the LTC.
M20	Traffic Management Measures (Orsett)	Mitigation for additional traffic movements on local roads through local settlements, including HGV movements.
M21	Traffic Management Measures (Horndon)	
M22	Traffic Management Measures (Chadwell St. Mary)	

* designated as high priority measure

Council-led Support

- ix. The LTC scheme will result in pressures upon the way some local businesses can operate, as well as the cohesion of local communities and their access to employment, education and public services and amenities. In turn, this will place additional pressures upon Council resources to support these groups and to continue to undertake their statutory duties.
- x. Three areas of **Local Labour and Business, Community and Public Health, and Transport Network Management and Development** have been identified, with a total of 12 measures, as summarised below:

Ref.	Scheme Measure	Brief Description
Local Labour and Business		
CLS1 *	Council-led Local Labour and Business Team	A Council team with the responsibility supporting residents and businesses secure economic benefits from the LTC.
CLS2	Business rates holidays for firms affected during construction	Business rates holidays for those businesses most affected by the LTC scheme during construction.
CLS3	Target for local labour and apprentice use	Establish clear targets for engaging local labour and apprentices during the construction of the LTC scheme
CLS4	Employment opportunities small capital grants scheme	Grants to support voluntary and community organisations who are helping local people into employment

CLS5	Social value procurement	Ensure LTC procurement meets with requirements of the Council commissioning, procurement and grant funding strategy
CLS6	Shop shutter/signage creative improvement programme	Grant funding to improve business environments and tackle perceptions of the local area
CLS7	Green business support scheme	Utilising and expanding on existing green initiatives.
Community and Public Health		
CLS8 *	Council-led Community and Public Health Team	Apply the same principle as the Local Labour and Business Team and create a Local Community and Public Health Team within Thurrock Council.
CLS9	Public Health mitigation during construction	Public Health mitigation measures including the enhancement of public transport to healthcare facilities and the reinforcement of local NHS provision.
CLS10	Community engagement during construction	Support to enable community engagement during the construction of the LTC scheme.
CLS11	Community investment small capital grants scheme	Capital grants to facilitate aesthetic and environmental improvements within the community.
Transport Network Management and Development		
CLS12	Transport Network Management and Development Resource	Additional Council resource provision to cover the requirements to manage and develop the transport network in response to the impacts of the LTC construction.

* designated as high priority measure

Legacy Measures

- xi. This final ‘theme’ represents measures to deliver a lasting legacy across Thurrock and positive local outcomes.
- xii. The proposed measures have been categorised within the following six ‘sub-themes’ that seek to **facilitate infrastructure** delivery, directly **provide infrastructure**, deliver **Green Corridors** and **enhance green space, restore heritage** and reduce impact upon **climate change**. A total of 21 measures have been identified within this ‘theme’ and are summarised below:

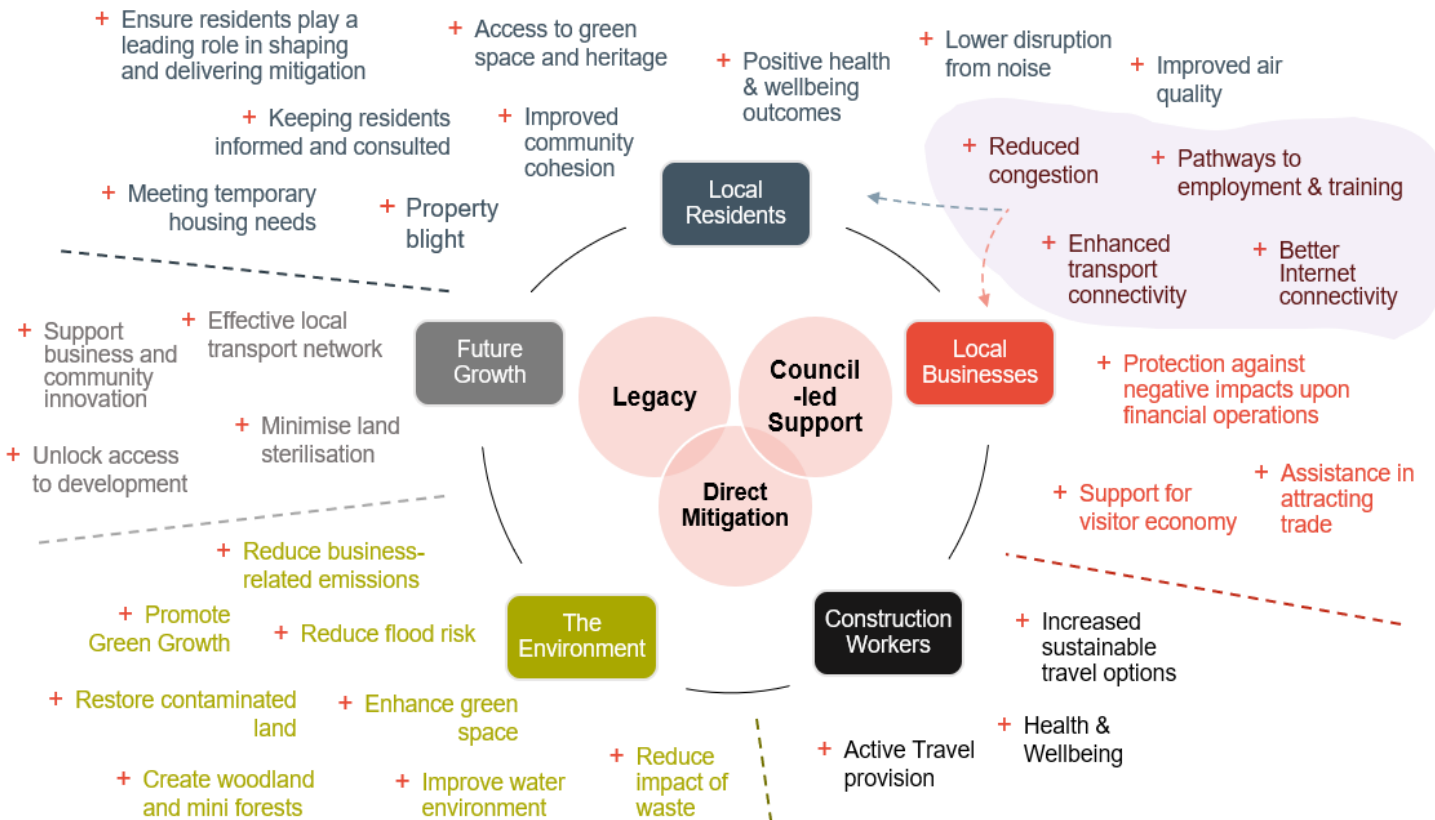
Ref.	Scheme Measure	Brief Description
Infrastructure Facilitation		
L1 *	Passive provision for LTC Junctions	Safeguarding for the future provision of junctions onto the LTC at East Tilbury and South Ockendon.
L2	A13 East-facing Access Support and Facilitation	Whilst this scheme will be delivered in isolation, it is requested that HE acknowledge the importance of this scheme alongside the delivery of the LTC and actively support and enable its delivery.
L3	Tilbury Link Road Enabling Works	Construct any elements of the proposed haul road that will fall within the general alignment of the TLR alignment to a standard to support the subsequent delivery of the Link Road.
L4	Asda Roundabout Enhancement	The requirement for enhancements should be actively examined alongside other potential highway improvements.
L5	Public transport provision on the LTC	Recognising the long-term aspiration for the LTC to be utilised for cross-river public transport connections.
L6	Distributor Road Facilitation	Maximise opportunities to utilise the construction of the LTC to enable future distributor roads to be more readily delivered.

Infrastructure / Highway Provision		
L7 *	Permanent Multi-modal rail crossing	Construct the proposed temporary bridge over the Tilbury Loop rail line to a width and standard that would enable it to be permanently adopted as part of the future local highway, walking and cycling network.
L8 *	A1012 Junction and Medebridge Road Improvement	Deliver the proposed construction haul road along Medebridge Road alignment from the A13 to Grangewater to a sufficient width and standard to enable it to be adopted by the Council.
L9	Daneholes Roundabout Enhancement	Provide a bus lane on the outside lane on the A1013 Stanford Road approach to the roundabout to enhance priority for buses.
L10	Improve Internet / 5G Connections	Utilise the construction phase of the LTC as an opportunity to lay down internet and 5G cables within the alignment and make provision on all bridges and tunnels, as appropriate
L11	Building Legacy Housing Provision	Provision of worker accommodation at Stanford-le-Hope that can be left as a legacy for Thurrock Council to use.
Green Corridors and PRow Enhancements		
L12	Optimising bridge crossing provision	Ensuring that the proposed re-provision of bridges across the LTC, along existing corridors, deliver sufficient legacy provision to encourage active sustainable travel and support future growth.
L13 *	Two Forts Way Project (TFWP)	The TFWP is a comprehensive masterplan for the coastal area incorporating the re-establishment of the TFW, through the repair to the sea wall and creation of a green corridor.
L14	Complete and improve the PRow network	A range of further improvements to complete gaps and enhance the current network of bridleways, footpaths and cycleways to complement the TFWP and the LTC bridge crossings.
Green Space Enhancements and Heritage Restoration		
L15	Enhanced Green Space	Enhance key sites (Koala Park, King George Playing Field, Blackshot Nature Area) that are currently of low quality and in need of investment.
L16 *	Coalhouse Fort and East Tilbury Natural and Cultural Heritage Area Project	Securing the legacy of Coalhouse Fort and the surrounding natural and cultural landscape through a comprehensive and integrated restoration project.
L17	Enabling the restoration of the historic landfill site and cleaning the marine habitat	Support and facilitate the collaborative partnership of organisations seeking to deliver the restoration of the site at Goshams Farm.
Climate Change Measures and Incentives		
L18	Incentives for low-emission vehicles to use the LTC	Ensure that electric and/or low-emission vehicles are incentivised to use the LTC with discounted or free use.
L19 *	Target (with penalties) for low-emission vehicle usage on the LTC	Low-emission vehicle usage targets with financial penalties payable to Thurrock in the event of exceedance.
L20	Carbon offsetting of the LTC scheme	Carbon offsetting measures across Thurrock that offset the CO ₂ produced by the construction and operation of the LTC
L21	Tree Planting across Thurrock	Additional street tree planting initiatives and the delivery of LTC Forest aspirations.

* designated as high priority measure

Benefits Mapping

xiii. The diagram below provides an overview of the benefits delivered by the whole package of measures



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