



## Transforming Cities Fund Application Form – Capital Schemes for Tranche 1 (under £10m)

Applications may be made for grants of up to £10m per city region for multiple schemes. **One application form must be completed per scheme.** Please include all relevant information with your completed application form.

### Applicant Information

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### SECTION A – Scheme description and Corridor name

#### **A1. Scheme name and location (please provide maps in an annex where necessary):**

Derby–Nottingham Active Travel Package

Area covering Derby – Nottingham – East Midlands Airport/East Midlands Gateway development area.

**See B2a Strategic Case AT Map Derby-Nottm**

#### **A2. Scheme description**

The scheme aims to help connect Derby and Nottingham, employment sites and areas of growth by improving links between them and providing easy access to hire bikes. This scheme comprises four components:

- (i) **Nottingham to East Midlands Airport via Clifton Growth area route improvements** - Improve access to Nottingham Station / city centre network from

the strategic southern cycle corridor, better connect Clifton / housing extension to the city centre in Nottingham.

- (ii) **Nottingham to Derby via Nottingham Enterprise Zone route improvements** - Integrate with new walking and cycling connections into and through Nottingham's Enterprise Zone, improve access from the Beeston canal towpath to the highway network; upgrade the towpath at pinch points; and install lighting under bridges.
- (iii) **Derby to Nottingham route improvements (Spondon area)** - Deliver Phase one of the strategic cycling route from Derby towards Nottingham along the former Spondon Canal, associated links and the former rail line.
- (iv) **Cycle hire/eBike scheme expansion** - Expand the current eBike scheme in Derby and provide support for a new docking cycle hire scheme with an eBike offer in Nottingham.

The total scheme value is £4.135m. The total funding sought from the Department for Transport is £3.300m.

## **SECTION B – The Business Case**

You may find the following DfT tools helpful in preparing your business case:

- [Transport Business Case](#)
- [Behavioural Insights Toolkit](#)
- [Logic Mapping Hints and Tips](#)

### **B1. Background (“What are the scheme objectives?”)**

Active travel improvements to better connect the networks that link Derby, Nottingham and East Midlands Airport/Gateway that will encourage an increase in sustainable, low carbon trips. They will also improve access to employment and achieve beneficial health, environmental and social outcomes:

#### **Deliver growth and drive up productivity**

The Midlands Engine identifies Derby-Nottingham as a priority area with potential to drive forward the Midlands economy. The area has attracted global businesses, and significant out-of-town employment growth hubs are emerging between the cities with supporting plans to build approximately 50,000 houses. Enhanced cycling/walking options will cater for this economic growth, improve productivity and make the area more attractive to investors.

#### **Improve access to work**

Existing employers such as East Midlands Airport find it increasingly difficult to recruit locally and, over coming years, East Midlands Gateway and our Enterprise Zones will recruit substantially and will experience similar issues. Despite this, both cities have higher unemployment areas, where people need reliable work but who find it difficult to take opportunities in out-of-town locations. Improved connectivity will improve access whilst active modes offer a low-cost means of travel to these expanding workplaces.

#### **Tackle congestion, air pollution and carbon emissions**

It is estimated that there are over 425,000 daily commutes (with a forecasted increase of 11% by 2033), 55% in and out of the cities. These cause significant congestion, particularly during peak periods. In the AM peak the average speed falls by 13 mph, causing an average delay of 11.2 minutes towards Nottingham and 7.2 minutes towards Derby. This congestion is estimated to cost the East Midlands £825 million per annum with over half

falling to business. Both Derby and Nottingham have areas exceeding European air quality limits for nitrogen dioxide mainly due to traffic emissions. These issues will be tackled through encouraging an increase in journeys made by sustainable modes.

#### **Improvements to health and social benefit**

Health and life expectancy in the area is below average, and there are areas of deprivation. Improving access to walking and cycling through infrastructure and new mobility systems and technology (eBikes), will improve health and reduce social isolation.

## **B2. Strategic Case - Scheme Rationale (“What does this scheme contribute to the programme objectives?”)**

### **Geography**

The strategic approach covers Derby and Nottingham conurbations and adjacent growth areas including the proposed HS2 East Midlands Hub Station (and proposed Innovation Campus) and around East Midlands Airport. The area is approximately 1,600 km<sup>2</sup>, across local authorities: Amber Valley, Ashfield, Broxtowe, Derby, Erewash, Gedling, Nottingham, Rushcliffe and South Derbyshire and also inside two county council boundaries (Derbyshire and Nottinghamshire). It is within the D2N2 Local Enterprise Partnership area and is a priority Midlands Engine economic growth hub. A Metro Dynamics study found this geography largely operates as an economic area with significant self-containment. A map showing the location of the area and the active travel improvement corridors is attached (**B2a Strategic Case AT Map Derby-Nottm**).

The scheme aims to help connect these conurbations, employment sites, and areas of growth by improving links between, and to, the Derby-Nottingham-East Midlands Gateway triangle. Examples of recently upgraded cycle infrastructure, ebikes and routes targeted for investment are attached (**B2 Strategic Case AT Visuals**).

Nottingham City Council is lead authority for the development of the D2N2 LEP LCWIP, which cover four local highway authorities, including Derby. This will be the largest national LCWIP in terms of geographic area and population (2.1m). Partners and supporting consultants are aiming to complete the plan by April 2019. This process has involved regular input from stakeholders and pedestrian/cyclist representatives. Proposals in this initial Transforming Cities bid will form an important part of the developing LCWIP. The completed LCWIP will strongly guide the development of future years’ programme of the Derby-Nottingham Transforming City proposals, including submissions to the D2N2 LEP to continue supporting walking/cycling infrastructure measures.

### **Scheme components**

#### **Component 1 - Nottingham to East Midlands Airport via Clifton Growth area route improvements**

This will connect Nottingham Rail Station, and the Clifton Growth Area on a route out towards the East Midlands Gateway development and East Midlands Airport comprising:

- Element 1 - Improved access to Nottingham Station/cycle parking hubs and city centre network from the south. This will involve a junction upgrade for cyclists and rebranding of the existing 20+ citywide secure cycle parking hubs to make them more visible.
- Element 2 - Upgrading of 1,200m on road cycle facilities to connect the residential area of Clifton and large housing extension with existing paths to complete a 9km off road

route to the city centre from the southern outskirts of Nottingham (N1 route corridor). Facilities will give priority at side roads and include a new parallel crossing.

- Element 3- Up to 2,100m of foot and cycle path upgrade along A453/B679, working with Highways England (N2 route corridor).

### **Component 2 – Nottingham to Derby via Nottingham Enterprise Zone route improvements**

This will upgrade sections of the off road route that links Nottingham and Derby including improved connections to the Nottingham Enterprise Zone:

- Element 1 - Integrate new walking and cycling connections into and through Nottingham's Enterprise Zone (Boots campus) strategic cycle route N3b.
- Element 2 - Upgrading of the traffic free route that follows the Nottingham-Beeston Canal. This will include improving links from the public highway, lighting under dark bridges and widening of the existing towpath at pinch points, along an 8.1km section of the canal.

The cycling infrastructure improvements will continue the successful Cycle City Ambition Programme (NCCAP) delivered between 2015 and 2018. This £7m series of primarily on-highway cycle facilities funded by the Local Enterprise Partnership (D2N2 LEP) aimed to provide high quality commuter corridors linking residential areas with the City Centre and the Nottingham's Enterprise Zone and universities. This has involved complex design and construction to reallocate roadspace and junctions for the exclusive use by bikes. This was the first step in delivering the Council's 2015 Cycling Vision to provide a world-class cycle network and double cycling to work by 2020.

### **Component 3 – Derby to Nottingham route improvements (Spondon area)**

This will improve cycling facilities in the Spondon area of Derby on a route between Derby and Nottingham comprising:

- Element 1 - Improved cycle access to an existing route; works to the former Canal Path between Megaloughton Lane and the proposed housing development and links from Spondon residential areas. New crossings on A52 slip roads, Derby Road, the access to the Asda Superstore and Raynesway.
- Element 2 - Improvements to existing cycle route linking Raynesway with Meadow Lane; new cycle links to residential areas and improvements to route between Highfield Lane and Meadow Lane.
- Element 3 - Off road cycle route along Chequers Road towards the city centre including the construction of a new Toucan crossing on Hampshire Road and improvements to junction layouts to provide improved access and better visibility for cyclists and pedestrians.
- Element 4 - New off road cycle route on land presently owned by Network Rail, including preparation works to wooded areas, fencing and access to the public highway and works adjacent to the Raynesway slip road.

### **Component 4 – Cycle hire/eBike scheme expansion**

The final component is an expansion of the existing eBike scheme in Derby and a contribution towards an expanded, replacement cycle hire scheme with an eBike component in Nottingham. The Derby scheme has been in operation since spring 2018 and is proving very popular with users. A growing number of organisations and developers have approached the Council to install bike-docking stations at or near their premises/sites. The

first stage of the Council's expansion programme includes purchasing electric vehicles for redistribution of bikes, additional charging stations and more bikes. Nottingham City Council is seeking to reinstate its popular citywide bike hire scheme, which ran from 2012 to 2016. It ceased operation due to ending of LSTF funding. It is pursuing a new privately based operating model with several interested companies. Public funding will be used on infrastructure including docking stations, signing, recharge facilities and eBikes. The aim of both schemes is to make bikes available to a wider section of residents, visitors, students and workers, particularly for first and last mile links to public transport interchanges. EBikes will also allow users to travel longer distances, increasing the potential to link both cities and East Midlands Gateway as well as being attractive to those people who are less physically active.

The following maps showing the location and extent of the schemes are attached:

**B2 Strategic Case Scheme Map Nottm**

**B2 Strategic Case Scheme Map Derby**

**B2 Strategic Case Scheme Map Region**

### **Economic and social context**

A shared industrial history and close proximity means Derby and Nottingham have developed complementary economies, worth over £30bn pa, rather than in competition. They have distinct high value sectors; Derby is a UK centre of excellence for transport equipment manufacturing accounting for 30% of its GVA, and Nottingham increasingly grows jobs in niche sectors such as life sciences, digital and fintech. There are a range of business and professional services, with many in both cities. Lower productivity sectors (e.g. retail, health and care, visitor) provide significant employment and jobs growth is forecast over next decade.

The area is experiencing significant growth, having been identified by the Midlands Engine as one of four priority areas with potential to drive forward the Midlands economy. The region has attracted global businesses and significant out-of-town employment growth hubs are emerging between the cities (i.e. HS2 East Midlands Hub Station) with supporting plans to build approximately 50,000 houses.

With increased growth comes the need for more journeys. The transport network is already strained with high levels of congestion witnessed at peak times, resulting in journey unreliability and costs to the economy. This is set to increase along with growth if we do not intervene with reliable, sustainable alternatives to the car. Transport infrastructure investment must join up economic and housing development to improve existing conditions and unlock transformational growth and productivity, including access to learning and health provision.

A large percentage of residents work, and most employees live, in the area. By providing a connected network of public transport and walking/cycling routes, a sustainable transport solution can be provided for most transport needs.

High levels of unemployment are also prevalent in some areas. With increased work opportunities arising through the enterprise zones and business parks, it is crucial we provide the means for these people to access employment. Many people do not have access to a car so enabling them to use alternative modes is essential. Active modes such as cycling and, where appropriate walking, can offer a low-cost travel solution.

This scheme provides infrastructure improvements which will provide more safe routes within Derby and Nottingham to enable connections from the outskirts to the city centres and will also provide connections to the public transport network through cycle-friendly

interchanges. EBikes enable those for whom cycling is too strenuous for some or all of their journey, to cycle, further increasing the potential for modal shift from the car. Workers can also commute longer distances using eBikes as has been taking place on the Continent, especially in Germany where Regional Governments are constructing intercity cycle routes.

Health and life expectancy in the area is below average, with Nottingham and Derby having significantly lower than England averages across all four life expectancy indicators.

The 'window of need' gap between life and healthy life expectancy is marked; in Nottingham, males spend an average of 27% and females 30% of their lives in poor health.

For each preventable cause, Nottingham and Derby consistently have the highest preventable mortality rates in the East Midlands. These are areas associated with the highest levels of deprivation in the region and people living here are more likely to suffer ill health and die prematurely. Health and life expectancy is increased through physical activity. By providing the ability for people to incorporate walking and cycling into their daily lives through better infrastructure and eBikes, the opportunity for exercising increases. This, along with reduced carbon emissions through less vehicle trips, will provide health benefits.

This scheme would therefore benefit the following people:

- Existing commuters, by providing an alternative to the car and faster journey times.
- Unemployed people, by connecting walking/cycling infrastructure and connecting this with the bus network, enabling whole journeys to be made by sustainable modes.
- Those living in deprived areas, providing low cost transport solutions, and improving access to emerging opportunities for communities.
- Disabled people through improvements to multi-use paths.
- Those unable to cycle because it is too strenuous, by providing eBikes
- People in poor health or are at risk of poor health, by providing exercise opportunities through the ability to access work, education, shopping etc and for leisure purposes, whilst reducing nitrogen dioxide through reduced carbon emissions.
- Businesses through improving productivity by reducing car-borne trips and therefore congestion for freight transport; better recruitment potential; reduced absenteeism; and better use of land allocations through reduced parking requirements.
- Bus/tram operators - providing better connectivity and interchange opportunities for last mile links will increase patronage and revenue.

Key statistics underpinning this section, are set out below:

- Workday population: 1.4 million - fifth largest urban area outside London and in European top 50.
- Predominantly urban (89% population) with approximate urban density of 2,000 people per km.
- High proportion of young people largely due to three highly rated universities (76,000 students).
- Over 600,000 jobs.
- 55% jobs located within the Derby and Nottingham administrative boundaries.
- 635,000 residents are in work (72% of 16-64s).
- 82% of residents work and 83% of employees live in the area.
- Overall unemployment rate 2.1% but ranges from 5.7% (Aspley in Nottingham and Cotmanhay in Erewash) to 0.2% (South West Parishes in Amber Valley).
- 72% of residents have at least 5 GCSEs grade A\* to C or equivalent compared to 75% nationally.
- 33% of people are qualified to degree level compared with 38% nationally but figures vary. In Ashfield, 59% of working age people have 5 GCSEs, and 18% a degree. Rushcliffe and Gedling have the highest proportions with 5 GCSEs and Rushcliffe, Broxtowe and Gedling the highest with a degree.

- Over 8% of projected population increase by 2029 with working age population to fall as a percentage of total.
- Up to an additional 50,000 houses are required over the next ten years.
- Urban-rural divide in life expectancy. Nottingham and Derby significantly lower than England averages across all four life expectancy indicators. Males in the least deprived Derby areas live 12 years, and females 8 years, longer than those in the most deprived areas.
- The 'window of need' gap between life and healthy life expectancy is marked, in Rutland, males spend an average of 13%, and females 17%, of their lives in poor health. In Nottingham, this equates to 27% of males and 30% of females on average.
- For each preventable cause, Nottingham and Derby consistently have the highest preventable mortality rates in the East Midlands. These are areas associated with the highest levels of deprivation in the region and people living here are more likely to suffer ill health and die prematurely.

### **Transport Barriers**

Although the region has good road links connecting the cities and out-of-town employment hubs, these are congested in the peak times. This is estimated to cost the East Midlands £825 million per annum with over half falling to business. The recently upgraded Derby-Nottingham transport model forecasts 11% increase in trips to 2033. With the level of growth planned for the region, we must provide the public with the ability to travel by more sustainable modes, otherwise congestion will increase resulting in poorer air quality and an increased cost to the local economy. The current road system is not sufficient to enable the growth which is anticipated.

With high unemployment and low car ownership in certain areas of the region, it is important that we connect these areas with new out-of-town employment areas providing a total door-to-door sustainable transport solution. Safe, integrated cycling infrastructure is key to achieve the door-to-door solution (including last mile links to public transport interchanges), as well as providing whole route solutions for shorter journeys. This scheme contributes to a wider set of actions to develop a high quality public transport network with key interchanges, that achieves a sustainable connected network available to all.

### **Exploring options and strategic alternatives**

The schemes form part of a wider package of deliverables which have been developed as part of a wider strategy for delivering a connected sustainable transport network. These particular schemes have been selected based on the ability to deliver them within the timescales of the Tranche 1 funding, and of which consents and, where applicable, match funding, has been secured or agreed.

### **Exploring impacts of interventions**

The economic appraisal presented in the Economic Case for this programme forecasts that the package of measures will result in a total of:

- 1,046 – 2,181 additional cycle trips per day
- 141,754 – 283,508 reduction in car passenger/driver km per year
- 88,956 – 177,192 fewer car vehicle km travelled per year
- 103,094 – 206,188 reduction in taxi passenger km travelled per year
- 42,956 – 85,911 fewer taxi vehicle km travelled per year
- 575 – 1,151 new cyclists
- 910 – 1,837 estimated days of reduced absenteeism

- 7.25 – 14.5 average avoided Years of Life Lost (YLL)

The first figure denotes the low scenario outputs (50% rise in local cycling levels) and the second figure is the high scenario outputs (100% rise in local cycling levels).

In terms of the benefits of the eBike hire scheme, the analysis shows that an additional 106 additional cycle trips will be undertaken as a result of the scheme resulting in:

- an additional 775,000 cycle trips over the appraisal period (2019-38).
- +6.24m additional cycling trips between 2019-38.
- 357,000 fewer car trips, saving approximately -2.87 vehicle kilometres to 2038.

A total of £11.97m (low scenario) to £21.27m (high scenario) of monetised economic benefits are estimated to be generated by full delivery of the package of schemes; yielding a Benefit Cost Ratio (BCR) of 3.98 (low scenario) to 7.08 (high scenario). The true level of return on investment is expected to lie somewhere between these two values (at circa. 5.5). The value of benefits breaks down as follows:

- 2.1% - 2.4% for external benefits from mode shift
- 65.5% - 75.4% for health benefits
- 32.4% - 22.2% for cycling ambience benefits

The following potential costs and benefits have not been quantified, but could reasonably be anticipated in the context of the package of measures proposed:

- Long-term operational revenues associated with the eBike hire scheme (expected to cover operational risks in the near-term).
- Social value associated with lower-income groups without access to a bike being able to complete cycling trips on a pay-as-you-go basis.
- Greater bus and tram Park & Ride usage through seamless interchange using eBike hire docks located at Park & Ride sites, key employment locations and at other public transport nodes along the growth corridors.
- More intensive occupation of employment sites along the growth corridors owing to higher levels of cycling to work, and better use of land allocations through reduced parking requirements.
- Improved bus and tram fare products, through integration of payment for eBike hire services with existing Robin Hood fares/accounts.
- Corridor-wide productivity benefits through reductions in public transport journey times, resulting from lower levels of 'with scheme' car use.
- Value of time savings for people achieving faster journeys as a result of switching modes to cycling when travelling at peak times

The impacts of the interventions have been set out in the detail within section B3.

### **Aligning with wider local plans and objectives**

- The approach is strongly linked to wider long term plans and spatial strategies around housing, local growth, productivity and air quality. Improving access to East Midlands Airport and development of the HS2 Connectivity Strategy are two clear priorities of **Transport for the East Midlands**.
- It is consistent with the **Government's Industrial Strategy** and **Transport Investment Strategy** as it will greatly improve local transport provision, improve productivity and help to rebalance the UK economy, improve competitiveness and local housing delivery.



- It supports the **Midlands Engine and associated Midlands Connect Transport Strategy** in strengthening economic performance by bringing economic activity closer together, and widening access to labour markets, supply chains and customers.
- The **D2N2 Strategic Economic Plan** identifies that investment in infrastructure will help unlock around 20,000 new jobs, 13,000 new homes and around £800m additional GVA by 2023. It also identifies connectivity as one of the key factors differentiating locations for investment.
- The scheme will help accelerate delivery of housing and employment sites set out in **local development plans**.
- The scheme is consistent with objectives for integrated transport set out in Local Transport Plans, and will deliver projects contained in the developing **D2N2 Local Cycling and Walking Infrastructure Plan**. In addition, it will help deliver **Safe Routes to School**.

In addition, the schemes link to the following plans:

- **Keeping Nottingham Moving/Derby Connected**
- **Nottingham Air Quality Plan**
- **Emerging Derby Air Quality Plan**

#### **Wider evidence and stakeholder views**

Transport for the East Midlands has brought together local authorities, including County Councils, to provide collective leadership on strategic transport issues for the region. It works to identify the transport priorities that will improve the region's economy and wellbeing of its people and to influence key delivery bodies.

Local leadership and vision is also being provided through the East Midlands HS2 Strategic Board that is overseeing the development of the East Midlands HS2 Growth Strategy that also supports the Midlands Connect Strategy and Midlands Engine.

A Derby-Nottingham Growth Board has been established which is an alliance of leading businesses, universities and local authorities to provide the power and profile to achieve our economic aims. They will develop and lead pioneering proposals and build dynamic cross-sector relationships to enable the area to make the step change in the prosperity it has the potential to achieve. They are committed to working with Government and providing resources if we are successful in this process. Members of the Board also sit on the D2N2 Local Enterprise Partnership Board and Midlands Engine structures, this will ensure strong challenge and championing of the strategic fit with wider initiatives. These stakeholders are committed to the provision of an integrated, connected sustainable transport solution and fully support this scheme.

The D2N2 LCWIP is being developed with ongoing input from key stakeholders including cycle/walk user groups, District Councils, Universities, various public bodies including the NHS, Environment Agency, Highways England and business representatives.

Surveys of residents and users have been undertaken in Nottingham over the last 3 years as part of the high quality LEP cycling corridor schemes monitoring programme. Cyclists have universally praised the schemes undertaken. Motorists, on the other hand, have expressed concerns about the loss of on street parking and roadspace and more delays.

**Objective**

**Impacts**

<i>TCF objectives met</i>	<ol style="list-style-type: none"> <li>1. Support the local economy and facilitate economic development by improving access to employment and reducing congestion.</li> <li>2. Reduce carbon emissions by increasing the volume and proportion of journeys made by low carbon, sustainable modes, in particular, walking and cycling.</li> </ol> <p>In addition, the following cross-cutting objectives are met:-</p> <ol style="list-style-type: none"> <li>3. Deliver wider social and economic benefits through accessibility and social inclusion.</li> <li>4. Improve air quality through reduced car-borne emissions.</li> <li>5. Drive up productivity, improve access to work and deliver growth through improved connectivity.</li> <li>6. Encourage the use of new mobility systems and technology through the eBike scheme.</li> </ol>
<i>Geographic corridor targeted</i>	Derby – Nottingham – East Midlands Airport/Gateway triangle.
<i>Primary user segment(s) targeted</i>	<ul style="list-style-type: none"> <li>• Commuters</li> <li>• Unemployed</li> <li>• School children</li> <li>• People with health and fitness problems</li> <li>• Visitors</li> <li>• General population</li> <li>• Businesses</li> <li>• Bus/tram operators</li> </ul>
<i>Other benefits (environmental, social etc.)</i>	<ul style="list-style-type: none"> <li>• Health benefits through improved air quality and increased walking and cycling opportunities.</li> <li>• Reduction in isolation and social exclusion.</li> <li>• Social benefits through connectivity.</li> <li>• Environmental benefits through a reduction in carbon emissions.</li> <li>• Economic benefits by providing better access to work opportunities</li> <li>• Wider economic benefits such as providing safer routes for travel, and value of time savings</li> </ul>

### **B3. Economic Case – Value for Money**

The proposed cycle infrastructure and e-bike hire scheme investments along targeted growth corridors are forecast to deliver a number of quantifiable and qualitative positive impacts over a 20-year appraisal period, running from 2019 to 2038. As well as directly improving the route and connectivity options for people travelling between key locations (by addressing gaps in local cycle networks identified through the DfT-supported LCWIP process); these proposals also support the wider environmental, traffic congestion reduction, public health, social inclusion, and integrated mobility aims identified in the Strategic Case.

## **Description of key impacts and benefits**

The range of forecast impacts has been summarised in Table B3.1 and was estimated using the Active Mode Appraisal Toolkit (AMAT) provided by DfT and recommended for this purpose. Anticipated benefits associated with both a Low and High impact scenario are presented. The Low scenario estimates the monetised value of benefits associated with a 50% increase in baseline local cycling activity levels resulting from the interventions. This is in-line with Sustrans' ex-post implementation monitoring of the impact of segregated cycle infrastructure investments on local cycling levels, which it carries out on an annual basis for all schemes delivered. The High Scenario forecasts the monetised benefits of an estimated doubling of cycling activity levels, which is in-line with both Central and Local Government's Cycling and Walking Investment Plans (and which seek to achieve this increase in cycling trip stages by 2025). Ongoing monitoring activity in Derby and Nottingham suggests both cities are on course to achieve this aim. However, continued and more widespread investment in high quality infrastructure that enables people ranging from 'capable 12-year olds' to 80-year olds to travel safely by bike for everyday journeys remains critical to sustaining early quick wins and transforming roadspace in 'missing link' locations of the Derby-Nottingham cycle network.

## **Data used to underpin the estimated impact of cycle network investments**

Baseline data on the levels of cycling activity that currently take place at the locations that are being targeted for improvement through this funding application were derived from a combination of:

- [Propensity to Cycle Tool](#) data, which are derived from responses to the Census 2011 travel to work survey question and infer route choice based on desire-line movements between Lower Super Output Areas for home-work trips. In some locations the baseline data was updated to reflect a more realistic number of cycle trips based on partial counts and anecdotal evidence from regular users and audits of the corridors.
- Local automated cycle count data, which has underpinned the baseline for Derby and Nottingham's LCWIP work and is being used to measure the local performance of walking and cycling network enhancements against national objectives.

This data relates as closely as possible to each of the cycle network locations upon which the proposed improvements are focused, and are documented in the appended file entitled: "**Nottingham-Derby-Metro\_TCF-Tranche1Bid\_Cycle-Trip-Estimates\_191218**". This file also contains breakdowns of the Low and High scenario forecasts of cycle trip numbers for each of the relevant cycle network links.

## **Sources of benefits**

As shown in the appended AMAT spreadsheets, the majority of benefits in both the Low (65% of NPV benefits) and High (75%) appraisal scenarios are derived from the protective health effects associated with the forecast increases in cycling levels. This is common to many cycling interventions of this nature, and reflects the high value of health outcomes on the UK's increasingly sedentary population. Benefits linked to vehicle traffic reductions and improved cycle journey quality account for between 35% and 25% of the total.

**Table B3.1: Quantitative and Qualitative impacts of scheme benefits (20-year appraisal period 2019-2038, NPV in 2010 prices and values)**

Impact metric	Low scenario (50% rise in local cycling levels)	High scenario (100% rise in local cycling levels)
Additional cycle trips per day	+1,046	+2,181
Additional Km cycled per annum	+1,288,672	+2,577,344
Reduction in car passenger/driver Km/year	-141,754	-283,508
Fewer car vehicle Km travelled/year	-88,956	-177,192
Reduction in taxi passenger Km travelled/year	-103,094	-206,188
Fewer taxi vehicle Km travelled per annum	-42,956	-85,911
PV of external benefits from mode shift	+£0.27m	+£0.53m
New cyclists	+575	+1,151
Estimated days reduced absenteeism	-910	-1,837
PV of reduced absenteeism	+£0.13m	+£0.27m
Additional time spent cycling per user/year	+2,464 mins	+2,464 mins
Ambience benefit per min cycling/user	+£0.0406 / min	+£0.0406 / min
Ambience benefit per user/year	+£0.27m	+£0.32m
PV of cycling ambience benefits	+£4.08m	+£4.87m
Average avoided Years of Life Lost (YLL)	+7.25	+14.50
PV of protective health benefits	+£8.25m	+£16.50m
PV of all quantifiable benefits	+£11.97m	+£21.27m
PV of all quantifiable costs	-£3.01m	-£3.01m
Benefit:Cost Ratio	<b>3.98</b>	<b>7.08</b>

Summary of non-quantified benefits	<ul style="list-style-type: none"> <li>• Social value associated with lower-income groups without access to a bike being able to complete cycling trips on a pay-as-you-go basis.</li> <li>• More intensive occupation of employment sites along the growth corridors owing to higher levels of cycling to work, and better use of land allocations through reduced parking requirements.</li> <li>• Corridor-wide productivity benefits through reductions in public transport journey times, resulting from lower levels of 'with scheme' car use.</li> <li>• Value of time savings for people achieving faster journeys as a result of switching modes to cycling when travelling at peak times.</li> <li>• Long-term operational revenues associated with the eBike hire scheme (expected to cover operational risks in the near-term).</li> <li>• Greater bus and tram Park &amp; Ride usage through seamless interchange using eBike hire docks located at Park &amp; Ride sites, key employment locations and at other public transport nodes along the growth corridors.</li> </ul>
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### Appraising cycle/eBike hire scheme impacts

As well as the positive impact the infrastructure investments are expected to have on local cycling levels, this effect is anticipated to be amplified by the expansion in Derby and introduction in Nottingham of the cycle/eBike hire scheme. We used evidence from COMO's [Shared Electric Bike Programme](#) to estimate this additional level of cycling activity in Derby and Nottingham. Measured impacts on cycling activity levels, distances travelled, and average bike hire frequencies drawn from across the 11 project locations suggest it is reasonable to expect each eBike to:

- Attract an average of 17 members and be hired 75 times within the first 12 months.
- Be hired for an average of 39 mins per session.
- Substitute a car trip with an eBike trip roughly every other trip (46% of the time).
- Cover an average of 8km per trip, instead of the average 5.5km for a conventional bike.

These assumptions were applied to the expected number of eBikes that will make up the expanded fleet in Derby, where the scheme is already operational, and Nottingham where

the scheme will be extended to focus on Park & Ride sites, public transport nodes, and key housing and employment sites along the Derby-Nottingham-East Midlands Airport growth corridors. The tab 'eBike hire scheme' in the appended MS Excel Spreadsheet entitled '**Nottingham-Derby-Metro\_TCF-Tranche1Bid\_Cycle-Trip-Estimates\_191218**' sets out our calculations and estimation changes in cycling levels resulting from the hire scheme's expansion. It enabled us to forecast that:

- +106 additional cycle trips will be undertaken in the Derby-Nottingham metro area each day as a result of the hire scheme, resulting in...
- an additional 775,000 cycle trips over the appraisal period (2019-38).
- +6.24m additional cycling trips between 2019-38.
- 357,000 fewer car trips, saving approximately -2.87 vehicle kilometres to 2038 (based on the average eBike trip distance from COMO's research).

These additional 106 daily cycle trips were included in the AMAT appraisal values and, as such, the estimated value of benefits are encapsulated in **Table B3.1**.

### **Distributional analysis of forecast benefits**

The benefits identified in **Table B3.1** will accrue primarily to new and existing cyclists using the upgraded and extended cycling infrastructure along the Derby-Nottingham-East Midlands Airport corridors. The routes are sufficiently integral to the whole cycle network that these improvements will benefit a wide range of people, but their geographic locations and proximity to strategic growth sites means that benefits are most likely to accrue to:

- People commuting between home and work locations along the major growth corridors.
- Staff and students at the Clifton Nottingham Trent University Campus.
- Residents, business occupiers and employees of the Clifton mixed use growth development close to the current Tram Park & Ride stop to the south of Nottingham.
- People commuting to the Boots Campus and the Nottingham Enterprise Zone.
- People commuting between Spondon, Derby station and Derby City Centre.
- People on lower incomes who are unable to afford to purchase a bike, but wish to use one on a more flexible basis.

No attempt has been made to appraise the wider economic benefits associated with the more-sustainable and accelerated delivery of housing and economic growth along the Derby – Nottingham – East Midlands Airport corridors. Given these corridors link some of the region's primary economic centres and growth hubs, it is reasonable to anticipate some degree of further Gross Value Added uplift as a result of the greater potential for people to travel actively between new homes and jobs linked to HS2, East Midlands Airport and the East Midlands Gateway development, and major Enterprise Zones in both Derby and Nottingham.

### **Value for Money assessment**

As shown in **Table B3.1**, and underpinned by the appended AMAT spreadsheets, the project impacts were evaluated over a 20-year appraisal period, with all values and prices adjusted to 2010 levels, and all future benefits discounted by 3.5% per annum in line with WebTAG guidance to account for social time preference. The economic appraisal shows an indicative Benefit-Cost Ratio (BCR) of 3.98 under the 'Low' cycling uptake scenario, or 7.08 under the 'High' scenario. This suggests the appraised project sits at the higher end of DfT's High Value threshold, with the true level of return on investment expected to lie somewhere between these two values (at circa. 5.5).

This 'Very High' level of value for money would be consistent with that typically delivered through lower-cost cycle scheme interventions of this nature. Annex A has been completed

as fully as is possible, with supplementary spreadsheets provided so that DfT's scheme appraisal team can explore the underlying assumptions and input values, as desired.

### **Key risks and uncertainties**

Derby and Nottingham City Councils, and their delivery partners, have significant experience of delivering both strategic and small-scale cycle network infrastructure improvements as part of their ongoing delivery of Cycle Ambition and LCWIP programmes. Given that a number of the proposed schemes have already been designed and are ready to be delivered, subject to funding, and in view of the limited timescales for delivery (which limits scope for challenging structures, such as bridges) we have included a 10% level of Optimism Bias within the scheme costs. This should ensure that adequate contingency is provided in the event of any unforeseen risks.

The delivery of the eBike hire scheme is largely de-risked through the existing supplier relationship that Derby City Council has with Hourbike Ltd, which will be used as the basis for expanding the scheme in Derby. Given the desire to offer interoperability across the Derby-Nottingham Metro area, Nottingham City Council is exploring the feasibility of drawing on Derby's existing supplier relationship in order to accelerate delivery of the eBike hire scheme at its public transport nodes, Park & Ride sites, and key destinations close to its growth corridors. Other suppliers have also shown an interest in providing this service so the most appropriate supplier can be selected based on price, quality and deliverability.

In terms of impact on scheme BCR, the most significant risk associated with the proposed package of projects is the assumed level of additional cycling activity that the combination of infrastructure improvements and eBike hire scheme expansion generates. To test the sensitivity of this risk we adjusted the input scenario to determine the level of additional cycling activity that will be required to achieve a 'break-even' BCR of 1:1. This indicated that only around 40 additional cycling trips per day are required in order to achieve the break-even return on the proposed investment over a 20-year appraisal period. In this scenario (illustrated in the spreadsheet entitled: '**Nottingham Derby Metro\_TCF-Bid\_active-mode-appraisal\_191218\_all-schemes\_Break-Even**') the vast majority of Net Present Benefits (91%) are forecast to be derived from the improved journey quality experienced by people using the upgraded and extended cycling infrastructure along the growth corridors, with health benefits reflecting less than 9% of the total. This reflects the fact that the cycle network links and crossing points that will be upgraded and extended are already reasonably well-used.

The appended AMAT files can be used to undertake further sensitivity tests in respect of different levels of increase in cycling levels, as desired.

### **B4. Financial Case – Scheme**

All costs associated with the active travel package are expected to commence in the 2018/19 financial year, with some elements of delivery over-hanging into the 2019/20 financial year. The scheme values are:

**Total scheme cost (£m):** £4.135m

**Total DfT (TCF) funding contribution (£m):** £3.300m

**Total public sector contribution (£m):** £0.000m

**Total local and/or private contribution (£m):** £0.835m (£10k Rushcliffe Borough Council developer contribution; £400k Walgreen Boots developer contribution; £100k Canals & Rivers Trust; £100k Network Rail; £225k eBike hire operator staffing cost contribution).

These costs have been discounted to 2010 real prices in order to facilitate the value for money assessment, and break down as follows:

**Total scheme cost (£m, 2010 prices):** £3.558m

**Total DfT (TCF) funding contribution (£m, 2010 prices):** £2.839m

**Total public sector contribution (£m, 2010 prices):** £0.000m

**Total local and/or private contribution (£m, 2010 prices):** £0.719m

**Table B4.1 Scheme Costs table**

Scheme Costs					
DfT funding sought (£m)	3.300				
Match contribution (£m)	0.835				
	<b>4.135</b>	includes Optimism Bias			
Scheme Measures	Estimated Cost	Optimism Bias %	Estimated Cost (2019 prices)	Match funding (third parties)	Total Cost (incl match)
<b>Component 1: Nottingham to East Midlands Airport via Clifton Growth Area route improvements</b>					
1. Improved access to Nottingham Station	0.125	10%	0.138	0.000	<b>0.138</b>
2. N1 route corridor	0.875	10%	0.963	0.010 Rushcliffe BC	<b>0.973</b>
3. N2 route corridor	0.500	10%	0.550	0.000	<b>0.550</b>
<b>Component 2: Nottingham to Derby via Nottingham Enterprise Zone route improvements</b>					
1. Nottingham Enterprise Zone access improvements	0.075	10%	0.083	0.400 Boots S106	<b>0.483</b>
2. Nottingham-Beeston Canal upgrading	0.125	10%	0.138	0.100 Canals and Rivers Trust	<b>0.238</b>
<b>Component 3: Derby to Nottingham improvements (Spondon area)</b>					
1. Canal route	0.250	10%	0.275	0.000	<b>0.275</b>
2. Raynesway link	0.100	10%	0.110	0.000	<b>0.110</b>
3. Chequers Road route	0.200	10%	0.220	0.000	<b>0.220</b>
4. Railway line route	0.200	10%	0.220	0.100 Network Rail	<b>0.320</b>
<b>Component 4: Cycle hire/eBike scheme expansion</b>					
1. Cycle hire/eBike scheme expansion	0.550	10%	0.605	0.225 Bike Hire operator	<b>0.830</b>
	<b>3.000</b>		<b>3.300</b>	<b>0.835</b>	<b>4.135</b>
	Cost excluding Optimism Bias		Total DfT Funding Sought	Total Third Party Match Funding	Total package value incl third party match funding (2019 prices)

## **B5. Management Case – Delivery and Risk Management**

Nottingham City Council will be the accountable body for the Derby-Nottingham Active Travel Package. The Council has a proven track record for delivery of large transport schemes through effective partnership working with a range of organisations across the public, private and third sectors. Evidence of successful partnership delivery includes the Nottingham Cycle City Ambition Package and Go Ultra Low Nottingham programme (which involves Derby City Council). The Council has worked with private sector organisations through delivery of major infrastructure projects including NET Line One, the development of NET Phase Two and the Nottingham Station redevelopment.

These examples demonstrate the significant knowledge and expertise the in-house teams hold in delivery of both large-scale infrastructure and specialist service improvements.

### **Risk Management Strategy**

Risks are tracked in accordance with the Council's corporate risk management principles, which draw upon the PRINCE2 methodology. This strategy requires the identification and recording of risks, an evaluation of their likelihood and any mitigation actions. This approach ensures that all risks are captured and processed in a consistent manner. Without mitigation, these could result in increased costs to the programme, reductions in the quality of outputs and slippages in timelines, all affecting the overall benefits and outcomes the business case seeks to deliver. Ownership of the risk register falls with the Programme Manager. These risks will be subject to on-going monitoring and mitigated through effective programme management and partnership working. A detailed report on the economical, political, legal and deliverability risks can be found in the attached document **B5 Management Case Risks**.

A Gantt chart, providing a visual representation of the delivery timescales is in the attached document **B5 Management Case Delivery**. The key points from these documents are summarised below.

### **Component 1- Nottingham to East Midlands Airport via Clifton Growth Area route improvements**

Element 1 – Improved access to Nottingham Station/cycle parking hubs and City Centre network from the south.

#### Risks

Overall risk rating - low

Coordination of the works with other major works in the city centre and innovation in the design work have been rated as medium. However early discussions with the relevant teams have been held and no issues have been flagged up.

#### Timeframe

Feb – Mar 19: Develop full business case

Mar – May 19: Work up detailed design

Jun 19: Commence works

Jul 19: Complete works

Element 2 – Nottingham N1 corridor extension to Clifton

#### Risks

Overall risk rating - low

No major risks have been identified for this element. Detailed design is complete and ECI has started with regards to deliverability.

#### Timeframe

Apr 19: Commence works

Aug 19: Complete works

Element 3 – Nottingham N2 corridor route improvement along A453/B679.

#### Risks

Overall risk rating - low



Some medium risks have been identified with regards to consents, procurement and communications between NCC and Highways England. However, NCC and HE have an ongoing dialogue to coordinate and deliver work pragmatically.

Timeframe

Jan-Feb 19: Work up detailed design  
Feb 19: Finalise procurement  
Mar 19: Finalise communications plan  
May 19: Commence works  
Aug 19: Complete works

**Component 2 – Nottingham to Derby via Nottingham Enterprise Zone route improvements**

Element 1 - Nottingham Enterprise Zone connections.

Risks

Overall risk rating low  
Contractor is available  
Agreements are in place with landowner Alliance Boots  
No procurement issues

Timeframe

Jan 19: detailed design  
Mar 19: Start, undertake and complete works

Element 2: Nottingham-Beeston Canal pinch points and towpath upgrading.

Risks

Overall risk rating low  
Some medium risks identified  
Scheme match is subject to another funding bid  
Detailed design is required. However the works are part of a package that can be managed to ensure deliverability.

Timeframe

Jan 19: Option assessment to determine deliverable items  
Feb – Mar 19: Detailed design  
Apr 19: Procurement and tenders  
May – Oct 19: Construction

**Component 3 – Derby to Nottingham route improvements (Spondon area)**

**Element 1 - Former Spondon Canal**

Risks

Overall risk rating - low  
No major risks have been identified for this element. Early discussions have taken place with Derby City Councils DLO to design and build the scheme.

Timeframe

May 19: finalise detailed design and commence works  
Dec 19: complete works

**Element 2 – Raynesway to Chequers Road**

### Risks

Overall risk rating – low

No major risks have been identified for this element. Early discussions have taken place with Derby City Councils DLO to design and build the scheme.

### Timeframe

May 19: Finalise detailed design and commence works

Sep 19: Complete works

## **Element 3 – Chequers to Derwent**

### Risks

Overall risk rating - low

No major risks have been identified for this element. Early discussions have taken place with Derby City Councils DLO to design and build the scheme.

### Timeframe

May 19: Finalise detailed design and commence works

Dec 19: Complete works

## **Element 4 – Megaloughton Lane**

### Risks

Overall risk rating - low

Some medium risks have been indicated for this scheme with regards to working on Network Rail land. However early discussions with Network Rail have indicated that they want to decommission the land in question and are on board with the scheme.

### Timeframe

May 19: Finalise detailed design and commence works

Feb 20: Complete works

## **Component 4 – Cycle hire/eBike scheme expansion**

Expansion of existing eBike scheme in Derby and development of new cycle hire with an eBike component in Nottingham.

### Risks

Overall risk rating – low

The Derby electric bike hire scheme is in operation and proving very popular with users. The Council has been approached by a growing number of organisations and developers to install bike docking stations at or near their premises/sites. Phase 1 of the Council's expansion programme includes purchasing electric vehicles for redistribution of bikes, additional charging stations and more bikes (in that order).

An operator has yet to be selected for Nottingham. However, the Council is in a dialogue with a number of interested parties who are very interested in starting in the City during the Summer 2019. The offers range from manual hire bikes with some electric provision to a full pedelec fleet.

### Timeframe

Feb 19: Finalise procurement route for Nottingham and begin ECI

March 19: Purchase electric distribution vehicle for Derby scheme

April 19: Purchase more docking stations for Derby scheme

May 19: Order more eBikes for Derby scheme  
Jun/July 19 – Start scheme on street in Nottingham

## **B6. Management Case – Governance**

Do you have governance processes in place to deliver the scheme?

Yes       No

Please provide the name and position of the Senior Responsible Owner:

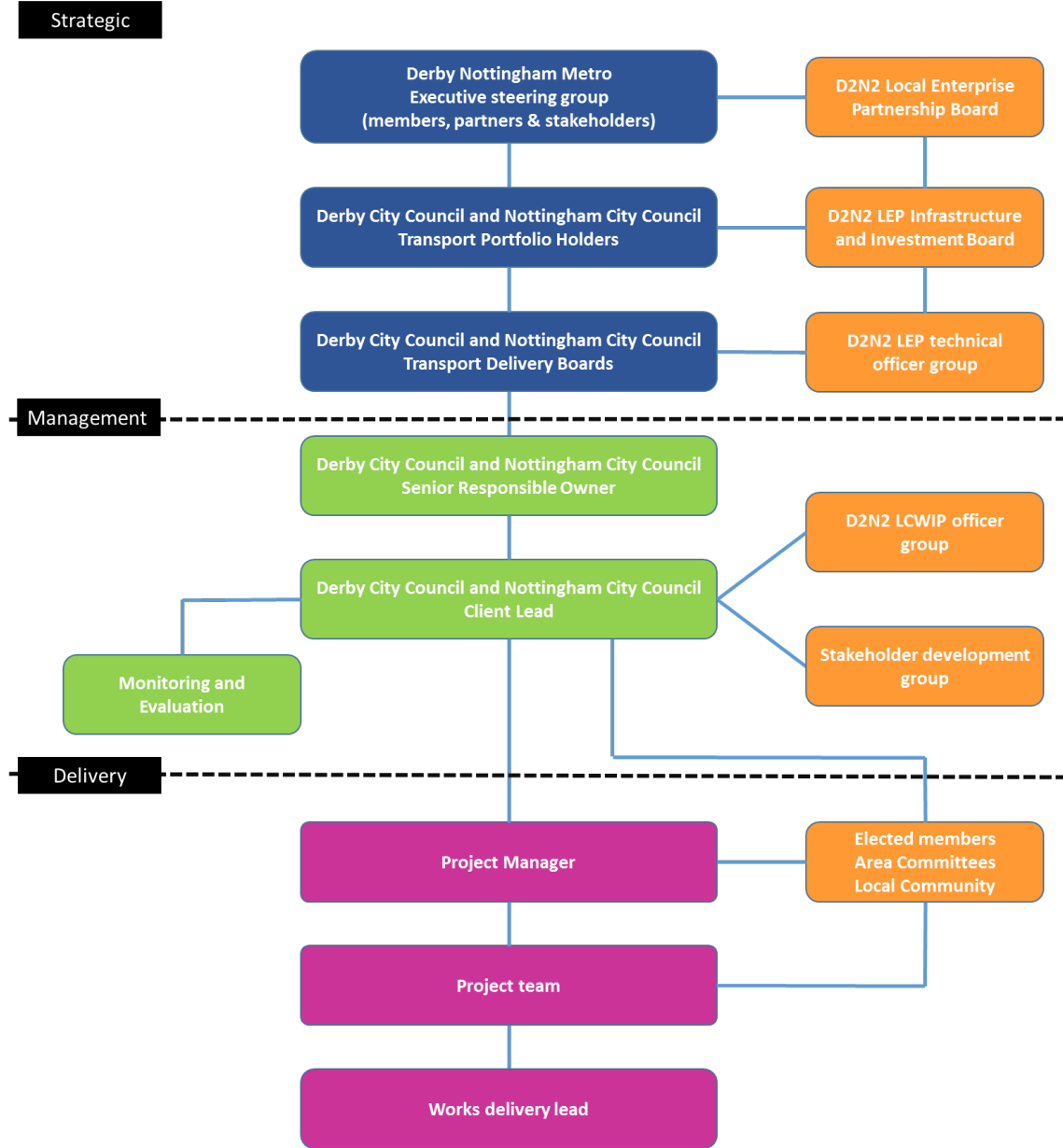
Chris Henning, Director, Development and Growth, Nottingham City Council

The proposed programme comprises mainly of infrastructure works, purchase of cycles/vehicle and commissioning of a cycle hire operator. A governance structure has been established to define the role, responsibilities and membership of those involved in the delivery of the proposed programme.

- Strategic: this comprises the key senior groups that will endorse area-wide programme delivery and provide input and overview in the wider planning and transport context, particularly in achieving economic growth priorities
- Management: this level covers the day to day management, coordination and liaison between the two authorities and within Derby and Nottingham councils. This will provide an interface between the delivery teams and strategic bodies;
- Delivery: this includes the key delivery teams responsible for executing the activities in line with the mandates set by the client team and SRO, reporting of progress and escalating any issues

The proposed programme governance structure is shown in **Figure B6.1**.

**Figure B6.1 – Governance Structure**



**Roles and responsibilities**

**Strategic bodies**

The Council Leaders and Portfolio Holders will represent the programme at a strategic Derby-Nottingham Metro Growth Board who will provide oversight and scrutiny of the programme to ensure it stays on track in meeting its deliverables and wider local policy objectives.

The roles and responsibilities of the Transport Delivery Boards will be to provide leadership, drive a robust approval and sign off process and guide delivery in respect to other transport strategies and wider portfolio priorities. Project Managers will attend transport delivery boards to provide updates on the progress of the programme in turn providing updates to the transport portfolio holders, raising with them any appropriate changes to the risks and issues of the programme in addition to securing any decisions that are required.

Programme progress against the deliverables will be shared with the D2N2 board, Infrastructure and Investment Board and technical officer group who will provide additional assurance against the deliverables.

### **Management and delivery**

The Senior Responsible Officer (SRO) will ensure that the programme is delivered on time, to budget and quality, and is ultimately responsible for the success of the programme by owning the business case, providing leadership, managing relationships with partners and stakeholders and recommending opportunities to optimise cost/benefits.

The programme and schemes will be overseen on a day to day basis by the client lead assisted by project managers. Working to PRINCE2 principles, the project managers will set up the project controls and will report to the client and SRO to update them on progress and for key decision making.

Staff involved in delivery in both Derby and Nottingham City Councils have extensive experience of delivering similar schemes. The project will operate within the framework of both organisations financial regulations, which set out instructions and guidance for processing business transactions. These cover budgetary control, procurement of goods and services, management, retention, security and disposal of records, payment for goods, services and works, risk management and insurance, protection of public funds, audit etc. The financial regulations are compliant with EU public procurement directives.

Project documentation and project team meetings and will be developed in line with PRINCE2 methodology, including the creation of a risk register. Risks will be subject to on-going monitoring and mitigation through effective programme management and partnership working. The Risk Register for each scheme will be presented and reviewed at management group meetings and key risks escalated to the SRO and Transport Delivery Boards as appropriate for reduction, elimination or acceptance.

The impact of any change will be discussed internally and with key stakeholders. If there is an impact on the project outcomes this would be raised as part of the reporting process. All processes would be agreed and included within a Project Initiation Document which will be produced by the Project Manager for each scheme.

In addition to internal stakeholders, external stakeholders will be kept informed about the works being delivered as part of Transforming Cities and their progress as appropriate. These external stakeholders include the Canal and River Trust, Highways England, Local Cycle Campaign groups, British Cycling, local universities and other local cycling and walking interest groups. For works taking place on the canal, a representative from the Canal and River Trust will be invited to join the project team.

Derby City Council and Nottingham City Council will deliver all works within their respective City areas. Working in partnership, both Councils will maintain overall responsibility for the programme and budget management of their schemes with a regular monitoring meeting between the client leads and Senior Responsible Officer (SRO).

## **B7. Commercial Case**

Nottingham & Derby City Councils have proven track records for the delivery of sustainable transport schemes through effective partnership working with a range of organisations across the public, private and third sectors. These skills will be utilised to deliver the programme, with delivery overseen by the client teams in both authorities.

Most of the work in Tranche 1 will be undertaken by the City Councils' in-house Direct Labour Organisations, or by a contractor from Lot 12 of the Nottingham City Council and Derby City Council joint framework contract (CPU765). This contract is a four year, £125 million European OJEU compliant NEC 3 based contract. The contract itself is managed and monitored by both Councils' Highway Services to ensure it achieves value for money, a satisfactory finished product and procurement adherence.

The City Councils' Financial Regulations and Standing Orders govern arrangements for the procurement of goods and services which will be adhered to throughout the life of the scheme. Activities are frequently tested for value for money through external benchmarking and market testing.

Nottingham City Council will be responsible for all financial management, monitoring and authorisation of all transactions and contractual arrangements between internal and external organisations to ensure compliance with all relevant legal and financial regulations relating to the procurement and commissioning of goods and services.

**Table B7.1** sets out the procurement approach with each element

Package component	Element	Procurement Strategy
Nottingham to East Midlands Airport via Clifton Growth Area route improvements	Nottingham Station improved access	No external procurement required. Element will be delivered through Nottingham City Council's in-house Direct Labour Organisation (DLO) and via an existing joint framework contract.
	N1 route corridor	No external procurement required. Element will be delivered through Nottingham City Council's in-house Direct Labour Organisation (DLO) and via an existing joint framework contract.
	N2 route corridor	No external procurement required. Element will be delivered through Nottingham City Council's in-house Direct Labour Organisation (DLO) and via an existing joint framework contract.
Nottingham to Derby via Nottingham Enterprise Zone route improvements	Nottingham Enterprise Zone access improvements	No external procurement required. Element will be delivered through Nottingham City Council's in-house Direct Labour Organisation (DLO) and via Boots contractor to link to the Canal Bridge.
	Nottingham-Beeston Canal upgrading	No external procurement required. Element will be delivered through Nottingham City Council's in-house Direct Labour Organisation (DLO) with the Canal and River Trust.
Derby to Nottingham route improvements (Spondon area)	Canal route	No external procurement required. Element will be delivered through Derby City Council's in-house Direct Labour Organisation (DLO) and via an existing joint framework contract.
	Raynesway link	No external procurement required. Element will be delivered through Derby City Council's in-house Direct Labour

		Organisation (DLO) and via an existing joint framework contract.
	Chequers Road route	No external procurement required. Element will be delivered through Derby City Council's in-house Direct Labour Organisation (DLO) and via an existing joint framework contract.
	Railway link route	No external procurement required. Element will be delivered through Derby City Council's in-house Direct Labour Organisation (DLO) working with Network Rail as required.
Cycle hire/eBike scheme expansion	Cycle hire/eBike scheme expansion	The Derby element will be delivered via working with the existing provider and supplier (Hourbike/Jump). The Nottingham eBike scheme will be developed via a partnership arrangement with selected private operator.

### B8. Equality Analysis

Has any Equality Analysis been undertaken in line with the Equality Duty?

Yes       No

See B8 Equality Analysis AT attached.

## **SECTION C – Monitoring, Evaluation and Benefits Realisation**

### C1. Monitoring

An **Annual Monitoring Report (AMR)** should be prepared following the completion of each year of the project. This will report on the outputs achieved each year for each individual project contained in the full package, including:

- Project update
- Financial spend
- Outputs achieved from each element of the project
- Reporting of any changes to the format of the project, and update on the risk register
- Overall summary of project progress

The AMR will be prepared by September of each year, reporting on the preceding financial year's activity. Hence, the first AMR would be prepared in September 2019 reporting on 2018/19.

Do you agree to undertake this monitoring?

Yes       No

## C2. Evaluation

Each scheme over £5m should be evaluated in line with the DfT's Monitoring and Evaluation Framework (2012). This requires the preparation of a monitoring and evaluation plan, to be signed off by the Department, as well as 1-year and 5-year post-completion evaluation reports. The evaluation should aim to identify to what extent schemes achieved their main objectives, and what value for money was achieved. In cases of innovative, complex or controversial projects, the evaluation should also explore what challenges the scheme implementation encountered and how it dealt with these challenges.

Do you agree to undertake this evaluation?

Yes       No

### Evaluation Approach for the Package

Derby and Nottingham both have experience of monitoring and evaluation of programmes similar to the one proposed in this application. Recently Nottingham City Council has developed robust monitoring frameworks for its £6.1m Cycle City Ambition and £6m Nottingham Enterprise Zone programmes which capture and evaluate many of the same quantitative and qualitative metrics required to evaluate the outputs and outcomes of this programme.

While this scheme falls under the £5 million threshold for mandatory Evaluation in accordance with Section C2 of the Transforming Cities Application form, the importance of evaluating the impact of schemes is appreciated and therefore a monitoring & evaluation plan will be developed to inform the annual monitoring reports and a final evaluation report.

A battery of indicators will be identified that are capable of monitoring progress toward each objective over the evaluation period. A baseline for these will be established and the indicators tracked throughout the monitoring period where appropriate.

Potential indicators to be monitored along the corridors subject to the improvements could include:

- Numbers of cyclists and pedestrians
- Cycle mode share
- Average travel times for general traffic,
- Modelled changes to NO<sub>2</sub>, particulate and Carbon emissions
- Cycle and Pedestrian user surveys - these surveys will be used to track changes in journey distance and travel time and perceptions to changes to ease of access to the workplace.

In addition to the above it will be important to estimate actual changes in productivity based on available time series data and the evaluation team will work with the DfT to determine the most appropriate method to achieve this. The indicators will also be analysed with a view to assessing Value for Money of the scheme.

The change observed in the above indicators will be subject to further research to take into account exogenous changes which could impact the ability of the scheme to meet its objective and thus to determine if the observed changes can truly be attributed to this scheme. While this will need to be considered more carefully in the Evaluation Plan, techniques that could be employed to achieve this for a scheme of this nature could be as follows:



1. A quasi experimental approach whereby indicators in the area subject to this scheme are compared to those from other similar urban areas or other parts of the D2N2 area isolated from the scheme
2. Direct interview surveys of public transport users whereby they are asked if they have changed their travel behaviour over the evaluation period and why. This will be essential to evidence improved access to employment and attribute any observed mode switch to the scheme.
3. A comparison of actual change with change expected according to the logic map.

The evidence from one or more of the above research methods, together with the changes to the indicators will be triangulated to generate robust conclusions as to whether the scheme has met its objectives and communicated via the annual monitoring reports and a final five year evaluation report.

### **C3. Cross-area evaluation**

The Department will lead on a cross-area evaluation, aimed at answering questions about the success of the Fund as a whole. This will involve case studies on identified topics of interest. Do you agree to take part in case study interviews and data collection if your area should be selected?

Yes       No

## **SECTION D - Declarations**

### **D1. Senior Responsible Owner Declaration**

As Senior Responsible Owner for Derby-Nottingham Public Transport Technology Package I hereby submit this request for approval to DfT on behalf of Derby-Nottingham and confirm that I have the necessary authority to do so.

I confirm that Derby-Nottingham will have all the necessary statutory powers in place to ensure the planned timescales in the application can be realised.

Name: Chris Henning

Signed:

Position: Corporate Director, Development and Growth, Nottingham City Council



### **D2. Section 151 Officer Declaration**

As Section 151 Officer for Nottingham City Council I declare that the scheme cost estimates quoted in this bid are accurate to the best of my knowledge and that Derby-Nottingham:

- has allocated sufficient budget to deliver this scheme on the basis of its proposed funding contribution;
- accepts responsibility for meeting any costs over and above the DfT contribution requested, including potential cost overruns and the underwriting of any funding contributions expected from third parties;
- accepts responsibility for meeting any ongoing revenue and capital requirements in relation to the scheme;
- accepts that no further increase in DfT funding will be considered beyond the maximum contribution requested and that no DfT funding will be provided after 2022/23;
- Confirms that the authority has the necessary governance and assurance arrangements in place and the authority can provide, if required, evidence of a stakeholder analysis and communications plan in place.

Name: Laura Pattman

Signed:



### **Submission of Bids**

The deadline for bids is: **6pm on Friday, 4 January 2019.**

An electronic copy (including supporting material) should be submitted to [tcfproposals@dft.gov.uk](mailto:tcfproposals@dft.gov.uk)

However, if you must send hard copies of papers, please provide three copies to:

Charles Small  
Head of English Devolution Team  
Transforming Cities Fund Business Cases

Department for Transport  
2/19, Great Minster House  
33 Horseferry Road  
London  
SW1P 4DR

## Annex A: Summary of Data Assumptions

The economic appraisal and value for money assessment summarised in the funding application form, and which underpins this bid, is documented in:

- Three Active Mode Appraisal Toolkit (AMAT) spreadsheets, covering:
  - A 'High' impact scenario
  - A 'Low' impact scenario
  - A 'Break-Even' return on investment scenario
- A separate MS Excel spreadsheet that documents the baseline and forecast baseline trip estimates associated with both the proposed cycle network improvements and those generated by the expanded eBike hire service in Derby and Nottingham.

All of these spreadsheets are documented in-line with key assumptions and include a 'Factors and Data' tab that references and sources relevant data from the TAG data book, WebTAG guidance and other appropriate transport research. As such the table below has been completed with the most relevant assumptions applied and references their sources.

Topic	Issue	Figure Used	Data Source / Evidence
General	Appraisal Period	20 years	AMAT default
	Decay Rate	3.5%	WebTAG guidance / AMAT data book
	Number of Days	220	Reflects locations of schemes near new housing/employment sites and likely bias towards commuter trips.
	Percentage of journeys that are return journeys	90%	Assumed based on AMAT default
Cycling	Number of cycling journeys in do nothing scenario/without project	2,181 per day	Combination of Propensity to Cycle Tool data from relevant routes and local monitoring data (see 'Change in daily cycle trips' tab in Cycle Trip Estimates spreadsheet).
	Number of cycling journeys in the do something scenario/with project	4,273 per day (High scenario)	Government target to double cycle journey stages by 2025.
		3,227 per day (Low scenario)	Half of government target, and close to the level of increase in cycle trips reported by Sustrans through its ex-post monitoring of cycle schemes.
	Average length cycling journey	5.6 km	AMAT / National Travel Survey, 2016 (Underplays eBike hire trips, which COMO research suggests average 8km)
	Average cycle speed	15km/hr	AMAT / National Travel Survey, 2016
	% of new cyclists that would otherwise use a car	11%  (46% for eBike hire scheme)	11% derived from AMAT forms. 46% value derived from COMO research into travel patterns of eBike hire scheme users across 11 UK projects.
	Average number of users per eBike in a hire scheme (yr 1)	17	Calculated from COMO research into eBike hire schemes (see tab 'eBike hire scheme calcs' in Cycle Trip Estimates spreadsheet).
Average number of hires (yr 1) per eBike, per year	75		
	Estimated scale-up of eBike hire membership, related to year 1 values	100% 125% 150% 200%	Assumption derived from COMO research and TfL London Bike Hire Scheme growth trends

