## Basic

No.	Stage	Benefit/characteristic	Qual/Quant?	Information Required	Source of Information (in UK)
1	ED	N/A	Quant	Implementation year	Person responsible for the project
2	ED		Quant	Evaluation period (no.	
		N/A		of years)	Person responsible for the project
3	ED	N/A	Quant	<b>Evaluation Base Year</b>	Person responsible for the project
4	PC		Quant	Project costs (per	
		N/A		year)	Person responsible for the project
	PC		Quant	Maintenance costs of	
				public realm when	
		N/A		complete (per year)	Person responsible for the project
5	SA	Dimensions of all Links and Spaces in	Quant	Lengths of links and	Measure using large scale plan, GIS software,
		study area		spaces	Google Maps or via site visit.
6	SA	Numbers of pedestrians using each Link	Quant		For guidance, TfL's Measuring Pedestrian
		and Space		Pedestrian counts	<u>Activity</u> is a useful document
7	D2 –L and		Quant	PERS scores for each	Carry out PERS audit of study area or engage
	D2-S			link and space, pre and	consultant to do so. Further information on
				post-improvement	PERS is available from TfL's Walking Good
		Quality of public space		(forecast)	<u>Practice</u> and TRL.
8	B6		Quant		Valuation Office Agency (England and Wales),
		Retail rents increase from improved		Rateable values of	the <u>Scottish Assessors</u> (Scotland) and the
		urban realm quality		retail property in each	Valuation and Lands Agency (Northern
				Link and Space	Ireland)
9	В7а	Residential property value increase	Quant	Sale prices of	
		from improved urban realm quality		residential property in	
				each Link and Space	Land Registry (via RightMove)

## Intermediate

No.	Stage	Benefit/characteristic	Qual/Quant?	Information Required	Source of Information (in UK)
1	ED	N/A	Quant	Implementation year	Person responsible for the project
2	ED	N/A	Quant	Evaluation period (no. of years)	Person responsible for the project
3	ED	N/A	Quant	Evaluation Base Year	Person responsible for the project
4	PC	N/A	Quant	Project costs (per year)	Person responsible for the project
5	PC		Quant	Maintenance costs of public realm	
		N/A		when complete (per year)	Person responsible for the project
6	SA	Dimensions of all Links and Spaces in study area	Quant	Lengths of links and spaces	Measure using large scale plan or via site visit.
7	SA	Numbers of pedestrians using each Link and Space under Baseline conditions and Scenario forecasts	Quant	Pedestrian counts	For guidance, TfL's <u>Measuring Pedestrian</u> <u>Activity</u> is a useful document
8	Sec D?	Heritage and local character	Qual	Description of how the proposed	Useful publications:
				measures will protect and enhance heritage and local character.	Heritage Works (2006) by RICS, British Property Federation, English Heritage and Drivers Jonas.  Demonstrating the Public Value of Heritage (2006) by The National Trust and Accenture
9	D2 –L and D2-S	Quality of public space	Quant	PERS scores for each link and space, pre and post-improvement (forecast)	Carry out PERS audit of study area or engage consultant to do so. Further information on PERS is available from TfL's <i>Walking Good Practice</i> and TRL.
10	B6	Retail rents increase from improved urban realm quality	Quant	Rateable values of retail property in each Link and Space	Valuation Office Agency (England and Wales), the <u>Scottish Assessors</u> (Scotland) and the <u>Valuation and Lands Agency (</u> Northern Ireland)
11	В7а	Residential property value increase from improved urban realm quality	Quant	Sale prices of residential property in each Link and Space	Land Registry (via <u>RightMove</u> )
12	Sec A	Emissions reduction from mode shift	Qual	If mode shift predictions are available, the net change in kilometres travelled by mode can be input.	Standard output from traffic modelling software packages
13	B1	Proportion of trips that are in-worktime	Quant	NB: This is optional; the Toolkit provides a national average figure for this by default.	Modelling source data (optional)
14	Sec C (C1 & C3)	Inclusive Design, Diversity and Adaptability	Qual	Benefits forecast in these areas as a result of proposed investment	Person responsible for the project
15	Sec E	Reduction in accidents and collisions	Quant	Accident statistics: (fatal, severe, slight)	Obtainable from police STATS19 data. Also see DfT WebTAG 3.4.1
16	Sec E	Increase in physical activity from encouraging new walk and cycle trips	Qual	Description of how the new measures will encourage people to walk and cycle who would not previously have done so.	NICE PH8 (2008) <u>Physical activity and the environment</u> NICE (2010) <u>Measuring effectiveness and cost effectiveness: the QALY</u>
17	Sec E	Crime reduction resulting from streetscape improvements	Qual	Description of how the proposed streetscape will increase footfall and eyes-on-the-street	See: Safer Places: The Planning System and Crime Prevention (2004)

## **Advanced**

No.	Stage	Benefit/characteristic	Qual/Quant?	Information Required	Source of Information (in UK)
1	ED	N/A	Quant	Implementation year	Person responsible for the project
2	ED	N/A	Quant	Evaluation period (no. of years)	Person responsible for the project
3	ED	N/A	Quant	Evaluation Base Year	Person responsible for the project
4	PC	N/A	Quant	Project costs (per year)	Person responsible for the project
5	PC	N/A	Quant	Maintenance costs of public realm	Person responsible for the project
				when complete (per year)	
6	SA	N/A	Quant	General Time Period of Analysis (per	Person responsible for the project
O	37 (	14//1	Quart	hour/peak period/day/week etc	reson responsible for the project
7	SA	N/A	Quant	Vehicle Time Period of Analysis (per	Person responsible for the project
,	3A	N/A	Quant	hour/peak period/day/week etc	reison responsible for the project
8	SA	N/A	Quant	Vehicle Time Period of Analysis (per	Person responsible for the project
0	SA	N/A	Quant	,	Person responsible for the project
C	CA	Diagonais as of all Links and	Overat	hour/peak period/day/week etc	Management of the large and a plantage in the cities
6	SA	Dimensions of all Links and	Quant	Lengths of links and spaces	Measure using large scale plan or via site visit.
10	6.4	Spaces in study area		<del>-</del> - 1	
10	SA	Users of the entire space	Quant	Total predicted trips and total	Standard output from traffic modelling
		throughout (baseline)		kilometres of the following modes	software packages
				(where appropriate): Bus, Car, Bicycle,	
				LGV, Light Rail Passenger, Motorcycle,	
				OGV, Pedestrian, Underground	
				Passenger	
11	SA	Users of the entire space	Quant	Total predicted trips and total	Standard output from traffic modelling
		throughout (scenario)		kilometres of the following modes	software packages
				(where appropriate): Bus, Car, Bicycle,	
				LGV, Light Rail Passenger, Motorcycle,	
				OGV, Pedestrian, Underground	
				Passenger	
12	Sec A	Expected change in emissions	Qual	Description of forecast impact of	Business plan/justification for scheme
		from mode shift (change in		proposal on mode shift	
		annual kilometres and CO <sub>2</sub>		p special control	
		emitted per passenger km)			
13	Sec A	Build (Embedded) emissions	Qual	Description of the embedded emissions	Results from carbon impact assessment
13	30071	Bana (Embeaded) emissions	Quai	associated with the use of proposed	nesales from earborn impact assessment
				materials (e.g. transport, longevity, etc.)	
14	Sec A	Climate Change Adaptation	Qual	Climate change adaptation refers to a	Describe how the proposed improvements
14	Sec A	Clifface Change Adaptation	Quai		
				new attitude towards people's	will help mitigate and reduce the effects of
				lifestyles, the built environment and	climate change.
				how to mitigate and reduce the effects	
				of changes in the climate.	
16	A1	Mode shift	Quant	If mode shift predictions are available,	Standard output from traffic modelling
				the net change in kilometres travelled	software packages
				by mode can be input.	
17	A2	Build Emission	Quant	Where a carbon impact assessment for	Results from carbon impact assessment
			•	a project has been undertaken, the net	
				carbon impact can be input directly into	
				the toolkit. Users can input annual	
				emissions for the construction year(s) or	
				for all years of the appraisal period,	
				expressed as either tCO <sub>2</sub> e or tCe.	
18	Sec B	B2 Tourism	Qual	Description of how proposed scheme	Business plan/justification for scheme.
10	JCC D	52 TOURISH	Quui	will create a high quality environment	basiness planty astineation for scheme.
		Analysis of major urban realm		that encourages people to use the place	It is possible to value the economic benefit of
				for longer, visit it more often and	
		projects such as London's South		<u> </u>	supporting tourism and/or other economic
		Bank and Trafalgar Square have		attracts new visitors.	activity, such as retail and leisure, by
		shown that visitors do spend			estimating the additional expenditure
		more time in these environments			generated by those additional visitor trips
		after the improvements			attracted by an urban realm improvement
					scheme.
					This process is not included in the VUR
					Toolkit.
19	Sec B	B3 Inward Investment	Qual	Description of how an improved urban	Business plan/justification for scheme.
				realm will attract businesses to the	
		In Cushman & Wakefield's		area.	The impact of the urban realm in attracting
		European Cities Monitor, 21% of			businesses to locate their operations in an
		businesses surveyed across			area could be valued in terms of the business
		Europe in 2009 deemed the			turnover attracted/secured and the number
		quality of life for their employees			of jobs created.
		an essential factor when deciding			
		where to locate their business			This process is not included in the VUR
					Toolkit.

20	Sec B	B5 Agglomeration In spatial economics, the term agglomeration is used to describe increasing returns as a result of spatial accessibility. This concept has been used to evaluate the impact of increasing transport capacity and labour market	Qual	Description of how increased spatial accessibility will generate increased returns through agglomeration	Business plan/justification for scheme.  TAG 3.5.14 on the wider economic impacts of transport schemes provides guidance on the agglomeration metric, known as 'effective density', which provides a measure of the clustering of economic activity, reflecting the accessibility of firms and employees to each
21	B1	access for economic hubs Improved conditions for pedestrians	Quant	Pedestrian flows (Baseline and proposed Scenario)	other. Output from traffic modelling software package
22	B1	Improved conditions for pedestrians	Quant	Proportion of pedestrian trips that are work-related	Also refer to TfL's <u>Measuring Pedestrian</u> <u>Activity</u> Optional. Generally available if used as an input to modelling software. National average can be selected if alternative information is
23	B1	Improved conditions for pedestrians	Quant	Mean time saving per pedestrian trip (either expressed as time or as a percentage reduction of an average trip time)	unavailable. Output from traffic modelling software package
24	B1	Improved conditions for bicyclists	Quant	Cycling flows (Baseline and proposed Scenario)	Output from traffic modelling software package
25	B1	Improved conditions for bicyclists	Quant	Proportion of cycling trips that are work-related	Also refer to TfL's <u>Measuring Pedestrian</u> <u>Activity</u> Optional. Generally available if used as an input to modelling software. National average can be selected if alternative information is
26	B1	Improved conditions for bicyclists	Quant	Mean time saving per cycle trip (either expressed as time or as a percentage reduction of an average trip time)	unavailable. Output from traffic modelling software package
27	В6	Retail rents increase from improved urban realm quality	Quant	Rateable values of retail property in each Link and Space	Valuation Office Agency (England and Wales), the <u>Scottish Assessors</u> (Scotland) and the <u>Valuation and Lands Agency</u> (Northern
28	В6	Retail rents increase from improved urban realm quality	Quant	Retail floorspace in affected Links and Spaces	Ireland) <u>Valuation Office Agency</u> (England and Wales), the <u>Scottish Assessors</u> (Scotland) and the <u>Valuation and Lands Agency</u> (Northern  Ireland)
29	В7а	Residential property value increase from improved urban realm quality	Quant	Sale prices of residential property in each Link and Space	Land Registry (via RightMove)
31	C1	Design of streets and spaces is made more inclusive	Qual	Description of how the built environment will be made more inclusive to all users, especially the most vulnerable ones, by proposed measures	The standard approach to measuring the inclusiveness of the public realm is undertaken predominantly by assessing existing or future designs and layouts against various sets of standards.
					For standards and examples of good practice, see <u>Inclusive Mobility</u> (DfT, 2005)
32	C2	Benefits expected as a result of reduction in pedestrian severance	Qual	No inputs are needed. These benefits are calculated as part of the B1 and D1 Local Connectivity benefits	N/A
33	C3	Versatility and adaptability of the space as a result of proposed improvements	Qual	Description of ability of space to accommodate and welcome a complete cross section of society. Outcomes of Equality Impact Assessment (EIA).	An excellent source of information on accommodating many different types of users in the public realm is <a href="Project for Public Spaces">Project for Public Spaces</a>
34	D1	Pedestrian and Cyclist Connectivity	Quant	Same data as used in B1	Same sources as used in B1
35 36	D2 D2	User Experience of Public Realm  User Experience of Public Realm	Quant Quant	PERS scores for each link and space, pre and post-improvement (forecast) Pedestrian flows for each link and public	Carry out PERS audit of study area or engage consultant to do so For guidance, TfL's <i>Measuring Pedestrian</i>
50	<i>52</i>	OSCI EXPENSIVE OF FUDILE NEGITI	Qualit	space (and the average number of static persons)	Activity is a useful document
37	D3	Reduction in noise disturbance	Quant	The final net present value of changes in house prices calculated using the TAG 3.3.2 methodology where relevant	Use <u>TAG 3.3.2</u> methodology to obtain a value and enter it in box D3 in Sec D

38	D4	Heritage and Local Character	Qual	Description of how the proposed measures will protect and enhance heritage and local character.	Useful publications  Heritage Works (2006) by RICS, British Property Federation, English Heritage and Drivers Jonas.
39	D5	Natural Landscape	Qual	Description of how the proposed measures will protect and enhance the natural landscape and the benefits associated with this.	Demonstrating the Public Value of Heritage (2006) by The National Trust and Accenture Indicators and datasets for measuring provision and usage of green space are available from:  Natural England GIS Digital Boundary Datasets CLG Land Use statistics National Green Flag Award data National Place Survey 2008/09 Natural England Monitor of Engagement with the Natural Environment 2009-10.
40	D6	Biodiversity	Qual	Description of how the proposed measures will contribute to maintaining	The <u>Green Infrastructure Valuation Toolkit</u> can provide values of increased biodiversity.
41	D7	Enhanced Community and Social Capital – benefits arising as a result of increases in social cohesion.  Reductions in crime levels can be significant here, with associated benefits for encouraging investment.	Qual	biodiversity.  Description of how the proposed measures will contribute to social cohesion.	There are two main approaches to measuring cohesion  1) Resident surveys, e.g. CLG Citizenship Survey (CLG, 2009b)  2) Use proxy measures, e.g. levels of crime, fear of crime, mental health, etc.  See: The Economic Case for Cohesion (DCLG, 2009) The Equality Trust Predictors of community cohesion: multi-level modelling of the 2005 Citizenship Survey (DCLG, 2008)
42	E1	Reduction in accidents / collisions	Quant	Accident statistics: (fatal, severe, slight)	Obtainable from police STATS19 data. Also see DfT WebTAG 3.4.1
43	E2	Reduction in non-vehicular accidents (trips and falls)	Qual	Description of how the improved footway maintenance will reduce the frequency of trips and falls.	See: Pavement Condition Information Systems (PCIS)
44	E3	Increase in physical activity from encouraging new walk and cycle trips	Quant	Requires assumptions to be made about the types of walking trips to be valued. This is selected from a drop-down menu. Other data for this criterion is calculated from previous sections.	See: NICE PH8 (2008) Physical activity and the environment  NICE (2010) Measuring effectiveness and cost effectiveness: the QALY
45	E4	Improved mental health and reduced stress	Qual	Description of how proposed improvements will make it more pleasant to be outdoors, increasing physical activity and reducing anxiety and fear of crime.	See: Grahn & Stigsdotter (2003) <u>Landscape</u> planning and stress.  Halpern, D., (1995) <u>Mental health and the</u> built environment: more than bricks and mortar?  Layard, R. (2006) <u>The Depression Report: A</u> New Deal for Depression and Anxiety
46	E5	Improved air quality from new trees and woodland provision	Quant	Numbers of trees in area under baseline and scenario and areas of woodland provision (Ha)	<u>Disorders</u> (LSE) See <u>DfT TAG 3.3.3</u> (quantifying the change in exposure to pollutants)
47	E6	Crime reduction	Quant	FIGURES FOR THE FOLLOWING CRIMES Violence against the person, Criminal damage. % change forecast	See: <u>Safer Places: The Planning System and</u> <u>Crime Prevention</u> (2004)