

# Deliverability Workshop RIBA Stages 3-4

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Places for  
Everyone



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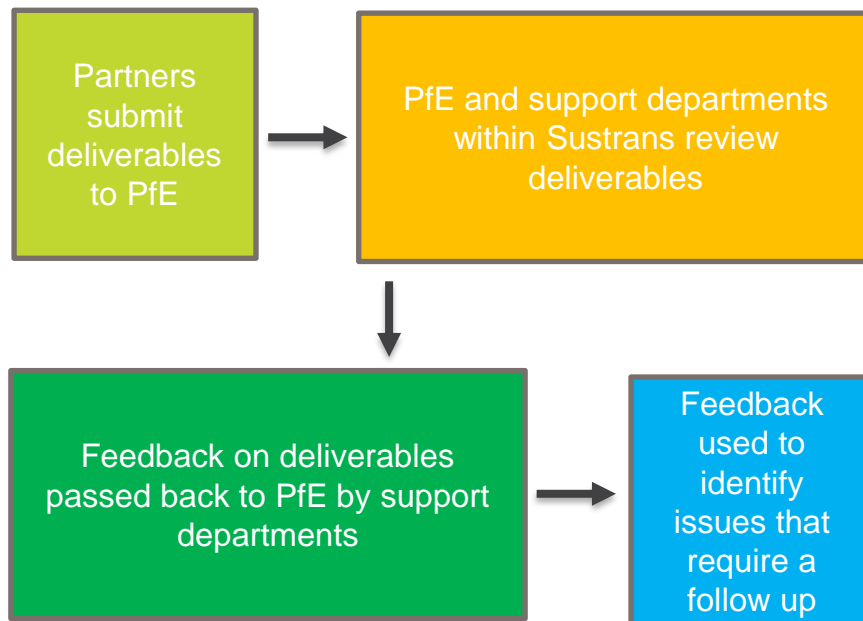
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## What RIBA Stage are your projects at?

<https://www.showcase-sustrans.org.uk/places-for-everyone/>

# Who we are and our role in Sustrans

- ▶ Assurance Team
  - ▶ Darren McHattie
  - ▶ Kieran Ward
- ▶ Design Team
  - ▶ Paul Ruffles



# Overview of RIBA Stages

- ▶ Based on Royal Institute of British Architects, RIBA, Stages
- ▶ Established to provide a plan of work to provide a structured approach to projects.

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- ▶ Stage 0 – Strategic Definition ('The Brief')

S0-2 Panel

- ▶ Stage 1 – Preparation & Brief (Feasibility Design)

- ▶ Stage 2 – Concept Design

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S3-4 Panel

- ▶ Stage 3 – Developed Design (AKA Spatial Coordination)

- ▶ Stage 4 – Technical Design

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S5-7 Panel

- ▶ Stage 5 – Construction

- ▶ Stage 6 – Handover

- ▶ Stage 7 – In use

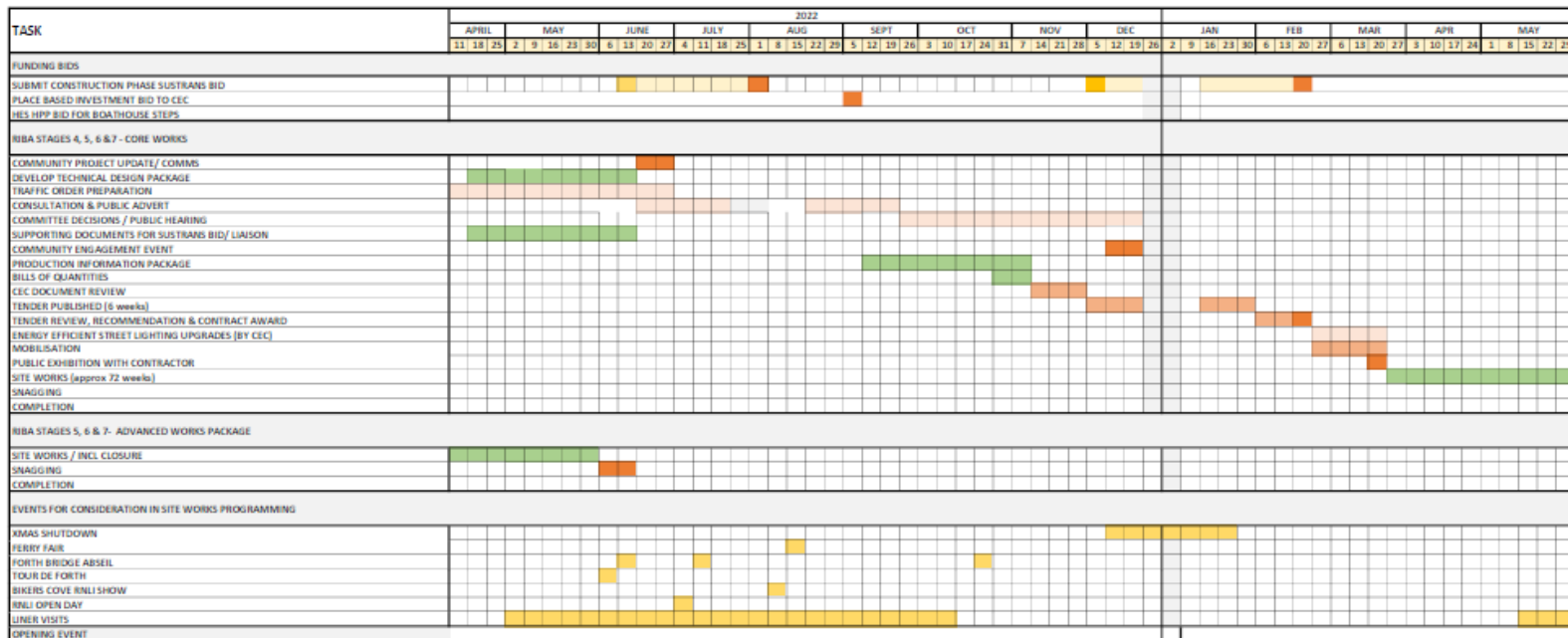
# Stage Descriptions

- ▶ Stage 3 Developed Design
  - ▶ Spatially coordinated; things fit together and don't interfere with one another where they shouldn't
  - ▶ Considerations for utility interfaces, junctions, crossings
  - ▶ Often more desk based surveys are completed within this stage
- ▶ Stage 4 Technical Design
  - ▶ Detailing out the Stage 3; material specifics, dimensions specifics, **3D designs**
  - ▶ Should include site surveys, ground investigations, GPR & Trial Holes (especially for urban sites)
  - ▶ The earlier surveys can be done, the better

# Key Points - Programmes

- ▶ **Q: What should be in a Stage 5 programme?**
- ▶ Should be realistic and account for;
  - ▶ award timescales and tender periods
  - ▶ Mobilisation and site set up
  - ▶ Public holidays, local public events, any embargos
  - ▶ Separate phases of the construction
  - ▶ Milestone tasks
  - ▶ Allowances and float
- ▶ In an ideal world a construction programme from a Contractor would be available for the Stage 5 submission, but this is not always possible

# Key Points – Programme Example



<https://www.showcase-sustrans.org.uk/places-for-everyone/>



# Key Points - Risk Registers

- ▶ **Q: What kinds of risks should be included in a Designers Risk Assessment (DRA)?**
- ▶ **Q: What kinds of risks would normally be included in a Project Risk Register? (PRR)**
- ▶ The registers are a key item from an early stage and are a key tool in informing how a project is costed and progressed,
- ▶ Are live documents and get continually updated
- ▶ Designers risk registers highlight risks that may impact the design during construction or use.
  - ▶ Should focus on site specific risks and unknowns
- ▶ Project Risk Registers outline high level risks,
  - ▶ E.g. lack of funding, lack of resource, political decisions etc.
- ▶ Costs should be associated to risks – this should form the basis of the risk allowance

# Key Points - Risk Register Example

Risk Ref No.	Status	Date Identified	Risk Title	Risk Description	Council Strategic Plan Alignment	Related Objective	Primary Risk Category	Risk Owner	Responsible Officer	IMPACT ASSESSMENT				Risk Treatment Approach	Control and Mitigating Actions	RISK ASSESSMENT				Date Reviewed	Movement in Period	Planned Next Steps and Future Action Required	Date of Next Review
										Inherent Impact	Inherent Probability	Inherent Risk	Inherent Res.			Residual Impact	Residual Probability	Residual Risk	Residual Res.				
LN.R.01	Open	14/03/22	Project Funding	<p><b>RISK:</b> Inclusion Projects fail to secure the required funding</p> <p><b>CAUSE:</b> Insufficient initial business case</p> <p><b>EFFECT:</b> Delay to the overall design and implementation of project interventions</p>	Sustainable and Low Carbon City	Sustainable Transportation Trust	Financial	Deak Dunlop	Craig Childers	0	3	15	Very High	Treat	Submission of initial funding applications supported by a strong Business Case demonstrating the value of interventions. Annuals required specifically	0	3	15	High	14/03/22	New	Submission of business case - need confirmation of approval process	14/03/2022
LN.R.02	Open	14/03/22	Project Brief	<p><b>RISK:</b> Design iterations and cost / programme adjustments</p> <p><b>CAUSE:</b> Introduction of changes by the Client to the project brief</p> <p><b>EFFECT:</b> Additional design works and delay to the overall programme</p>	Sustainable and Low Carbon City	Sustainable Transportation Trust	Change	Deak Dunlop	Craig Childers	3	4	12	High	Treat	Regular Client liaison meeting to discuss and clarify any changes early to minimise any disruption to the design process	3	3	9	Medium	14/03/22	New	Complete Stage 2 and get client sign-off	14/03/2022
LN.R.03	Open	14/03/22	Political Engagement	<p><b>RISK:</b> Reduced or no political support for the project design / objectives at key approval stages</p> <p><b>CAUSE:</b> Lack of political interest prior to initial brief</p> <p><b>EFFECT:</b> Amendments to original scope of works and delay to the overall programme</p>	Sustainable and Low Carbon City	Sustainable Transportation Trust	Political	Deak Dunlop	Craig Childers	4	4	16	Very High	Treat	Engage all political stakeholders early and fully engaged in the process	4	3	12	High	14/03/22	New	BCR Committee approval	14/03/2022
LN.R.04	Open	14/03/22	Change in Political Leadership	<p><b>RISK:</b> Loss of support or change in strategic direction</p> <p><b>CAUSE:</b> Change in political leadership at a national or local level</p> <p><b>EFFECT:</b> Change to project brief resulting in additional or alternative works</p>	Sustainable and Low Carbon City	Sustainable Transportation Trust	Political	Deak Dunlop	Craig Childers	4	1	4	Low	Tolerate	Engage all political stakeholders and ensure consistent and robust objectives of current political regime	4	1	4	Low	14/03/22	New	Monitor movements of political stance and any changes to policy	14/03/2022
LN.R.05	Open	14/03/22	Community Support	<p><b>RISK:</b> Reduced or no community support for the project design / objectives at key approval stages</p> <p><b>CAUSE:</b> Lack of local support for proposed interventions eg removal of parking</p> <p><b>EFFECT:</b> Amendments to original scope of works</p>	Sustainable and Low Carbon City	Sustainable Transportation Trust	Operational	Deak Dunlop	Craig Childers	4	4	16	Very High	Treat	Engage all political stakeholders early and fully engaged in the process. Ensure robust community engagement	4	3	12	High	14/03/22	New	Community engagement Day/Co-Op	14/03/2022
LN.R.06	Open	14/03/22	Ecological Impact	<p><b>RISK:</b> Ecology Assessment identifies areas that need a Nature Impact or other mitigation</p> <p><b>CAUSE:</b> Identification of protected wildlife or plants that require to be address as part of the intervention (eg Badgers, Bats, Protected etc)</p> <p><b>EFFECT:</b> Design modification and delay to the overall programme</p>	Sustainable and Low Carbon City	Sustainable Transportation Trust	Environmental	Technical Design Team	Technical Design Team	4	3	12	High	Treat	Conduct early ecology assessment to identify any protected areas to be addressed through the design process. Conduct a walk-in to Cherry Railway, Road 1000/1001 and Redfield/Queens Park.	3	3	9	Medium	14/03/22	New	Runway TSO at appropriate stage of design process	14/03/2022
LN.R.07	Open	14/03/22	Working Utility Services	<p><b>RISK:</b> Working utility services require diversion / protection</p> <p><b>CAUSE:</b> Design proposed impact on existing utility services</p> <p><b>EFFECT:</b> Additional construction costs and delay to the programme</p>	Sustainable and Low Carbon City	Sustainable Transportation Trust	Operational	Technical Design Team	Technical Design Team	4	3	12	High	Treat	Identify working utility services on the site at the earliest opportunity, undertake the required investigation to inform the design process	3	3	9	Medium	14/03/22	New	Runway TSO at appropriate stage of design process	14/03/2022
LN.R.08	Open	14/03/22	BPPA Licensing	<p><b>RISK:</b> Failure to meet BPPA requirements</p> <p><b>CAUSE:</b> Construction methodology proximity to</p>	Sustainable and Low Carbon City	Sustainable Transportation Trust	Legislative /							Tender to contractor who should								Communication with Contractor	

# Key Points - Price Estimates 1

- ▶ Aim is to build up a robust cost estimate based on current market rates
- ▶ A full BoQ with item breakdown is expected with quantities and rates
  - ▶ Works items, traffic management, any staff time, preliminaries, utilities etc
- ▶ Contingency / Risk allowance added should be linked to the risk register
- ▶ Should include allowances for inflation covering to the end of the tender period, as well as for inflation which could be incurred during construction
- ▶ We need to see the total Stage 5-7 costs broken down, including highlighting which sections you are seeking the 70% funding for

# Key points - Price Estimates 2

Table 13.4: Recommended Optimism Bias Uplifts

Category	Types of Project	Stage 1	Stage 2	Stage 3
<b>Roads</b>	Motorway	44%*	15%	3%*
	Trunk roads			
	Local roads			
	Bicycle facilities			
	Pedestrian facilities			
	Park and ride			
	Bus lane schemes			
	Guided buses on wheels			
<b>Fixed Links</b>	Bridges and Tunnels	66%*	23%	6%*
<b>Building Projects</b>	Stations and Terminal buildings	51%*	-	4%*
<b>IT Projects</b>	IT system development	200%*	-	10%*

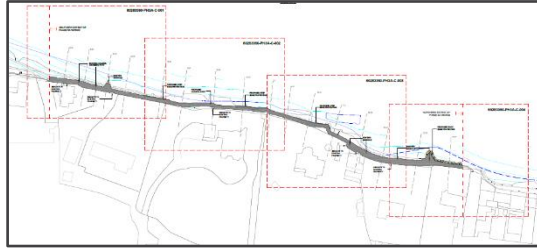
Note: Stages noted on this snip are not RIBA Stages

Stage 3 roughly correlates with end of RIBA Stage 4

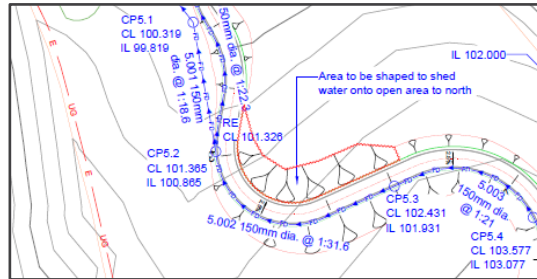
# Key Points - Permissions

- ▶ **Q: What might these cover?**
- ▶ Any landownership issues should be finalised by point of Stage 5-7 application
- ▶ Future ownership of the asset should be confirmed, including:
  - ▶ Who will maintain it
  - ▶ That public liability insurance is in place
  - ▶ A maintenance plan
- ▶ Often trickier for non local authority Clients who may be working to get the LA to adopt their scheme
- ▶ PFE require completed infrastructure to be operational for a minimum period of 15 years

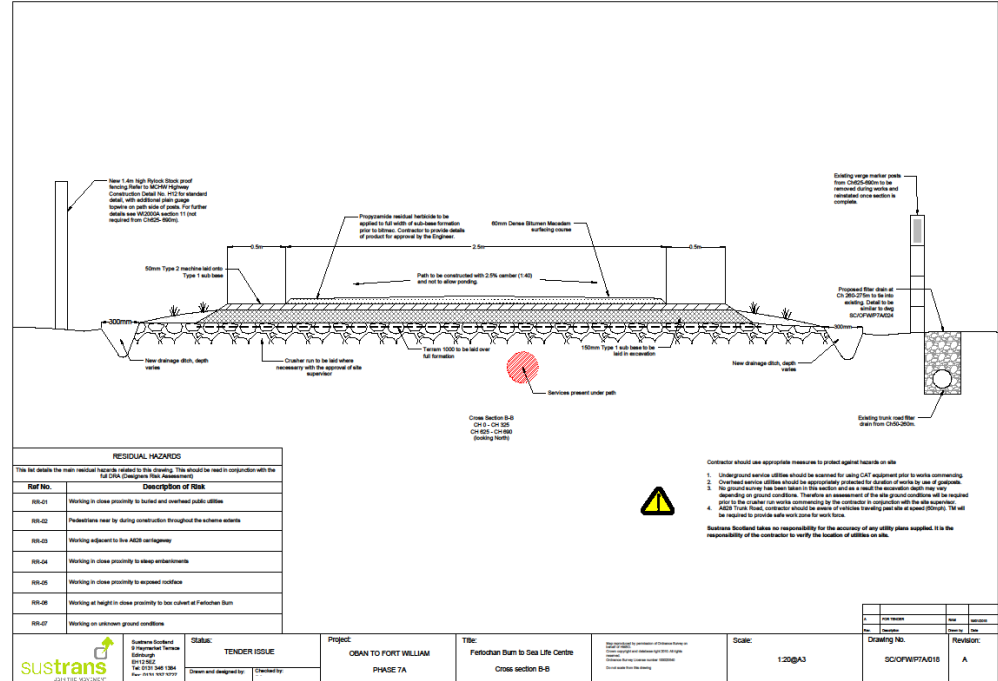
# Key Points – Stage 4 Designs



Example: Overview Plan



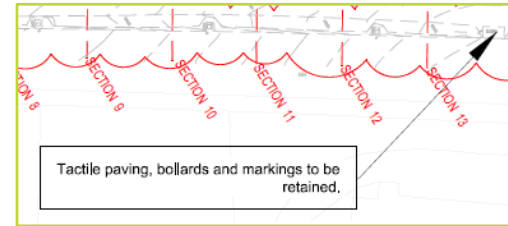
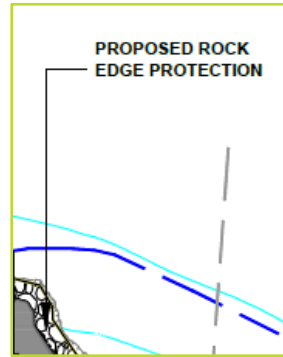
Example: Drainage detail



Example: Construction Specification Detail from Cullen in Moray

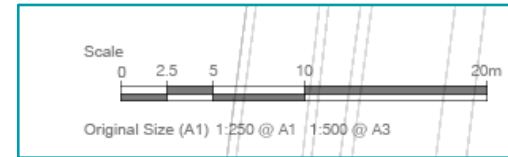
# Key points – Drawings 1

Labels



Scales

Scale at A3:  
1:5000



SCALE 1:200 @ A1

Road names

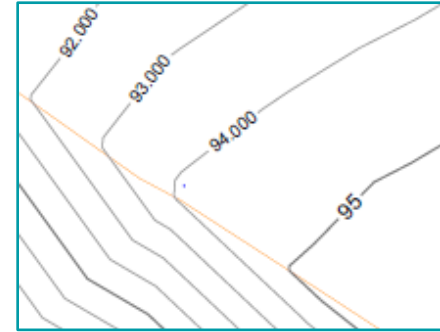
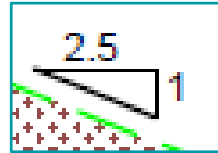
Hillend Road

# Key points – Drawings 2










Dimensions





Topography/Gradient



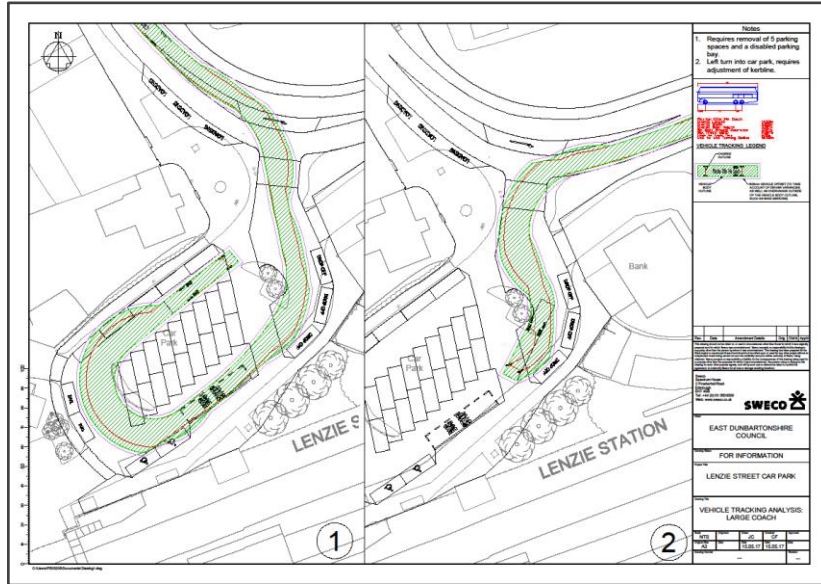
Key

Key:	
	Footway / Splitter Island
	Carriageway
	Shared Use Surfacing
	Segregated Cycle Route
	Planting
	Buff Tactile Paving
	Red Tactile Paving
	Proposed Kerb
	Edging Kerb

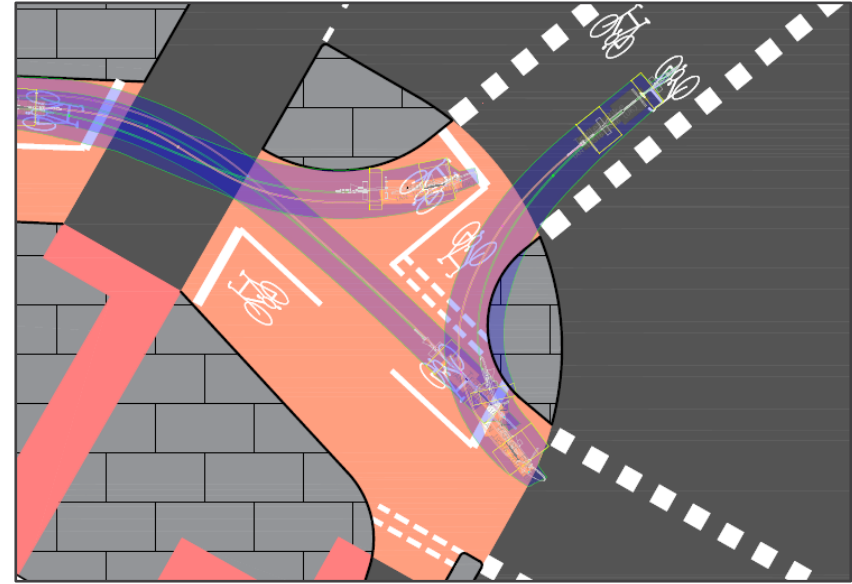
	Proposed Route (Sealed Path)
	Planted bund created from construction arisings (location tbc with landowner).



# Key points –Tracking



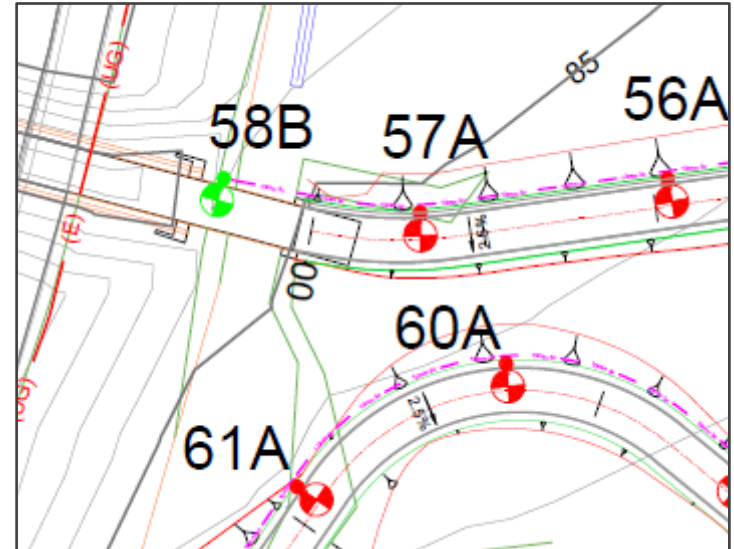
Example: Large vehicle tracking – Lenzie Station Forecourt



Example: Cyclists tracking – Design Development work for Ardrossan

# Key points - utilities

- ▶ Utilities not shown on drawings, this is a CDM requirement
- ▶ Important that underground apparatus is shown on drawings that instruct the breaking of ground; be mindful that overhead utilities are relevant too
- ▶ Can show utilities indicatively and caveat as so, "...Contractor to refer to actual service plans" etc.
- ▶ There is always a risk of uncharted or inaccurate services!
- ▶ Residual risks should be shown and annotated on drawings; again a CDM requirement



Example: Extract from utility drawing

# Top 10 Common things missed

1. Not showing residual risks on drawings
2. Not showing public utilities on drawings particularly those that instruct the breaking of ground
3. Not referencing the risk register on drawings
4. Not allocating costs to items flagged in the risk register
5. Drainage considerations and solutions; drainage drawings
6. Long sections and gradients / setting out information
7. Designers responses to the Stage 2 Road Safety Audits
8. Providing a tender plan or approach
9. Confirmation of adoption / approved planning permission / a maintenance plan for the scheme
10. Suitable budget breakdowns / construction estimates by detailed MCHW series

**What percentage should you allow  
for design fees?**

# Key points – Communication

Wick Street Design Project Latest news

## Project news and updates

### Final concept designs just in time for Christmas!

Posted on Dec 22nd 2020 by Wick Street Design Team  
[View post and share](#)

As 2020 draws to a close, so does our team's role in the Wick Street Design Project. We are now in the process of handing over the project to the Highland Council and Wick Community Council. But before we do, we want to thank you for joining us on this journey to create a new image for Wick's pedestrian precinct as a warm, welcoming and attractive place for people to gather and move around in.

This year has brought with it many challenges, but also many uplifting moments that we've been pleased to share with you. Since the project launched in October last year, Wickers have been pulling up their sleeves to install planters, paint a bench, develop design ideas and celebrate Wick's heritage.

Even with Covid restrictions forcing us to cancel many of the events we had planned to engage you all in the design process, your community champions on our project steering group worked hard to make sure you were able to have your say on the proposals. The effort that you all have put in to guide the design process has been invaluable, and together we have produced a concept design that is truly representative of the views and needs of local people.

We are pleased to finally be able to add the **completed concept design (check here)** to your Christmas stockings! They will also be available to view in person outside Caithness in the new year. If you're safely able to be out and about in January, do take a look.

#### Get project news

Do you want to receive an email when news items are posted?

Your email

[Get project news](#)

## Spey Street Junction

### Design & Visual



Fig 4 - Site plan showcasing the proposals



Fig 5 - Visual of the proposals

Example (above): Extract from Wick Street Design Project  
Commonplace site

Example (right): Visualisation developed for  
Kingussie

# Key points – EqIA

- ▶ Positive tool
- ▶ Significant value in refining design proposals
- ▶ Treated as ‘living document’ - starts as soon as possible
- ▶ Supplement to more focused engagement
- ▶ Evidential basis for demonstrating engagement with groups with protected characteristics and design refinement

Please outline <b>what is known currently</b> about the experiences of people under <b>each characteristic</b>		Source
2.1	<b>Age</b> <i>Including the experiences of young people (age 18 and under) and older people.</i>	Under 18's The project area includes Hurford Primary school and Nursery and is in the catchment area for Loudon Academy.
		<p>Specific activities and engagement activities have taken place with the local primary school alongside public events and online engagement.</p> <p>Comments gathered from engagement with this audience suggest:</p> <ul style="list-style-type: none"> <li>• That safety is an issue for pupils playing outside in Hurford.</li> <li>• The speed of vehicles on Mauchline Road and Academy Street is too fast for the pupils to feel safe walking/scooting/cycling to school.</li> <li>• The Zebra crossing on Mauchline road next to junction with <u>Cessnock road</u> and Blair Road is used by many pupils on the way to and from school.</li> <li>• <u>The Access road</u> is also well used by pupils on the way to and from school and has had a negative perception of safety from pupils due to there being no pavement and due to road surface.</li> <li>• Lack of places to sit or play outside shops on Mauchline Road has been highlighted as an issue for young people when waiting for parents.</li> <li>• Lack of green space been highlighted by pupils.</li> </ul> <p>To Consider: Trying to engage with young adults (12-18) as we have been struggling to reach this group of people.</p> <p>Older generation Hurford hosts the local Age Concern club meeting once a week with many people from Hurford attending. There are also 2 care homes on the outskirts of Hurford and Sheltered housing just outside the project area.</p> <p>Information from activities and events suggests:</p> <ul style="list-style-type: none"> <li>• <u>Slippy</u> surface on Mauchline Road hardstanding ground can be dangerous from older citizens in winter.</li> <li>• There is a lack of places to sit and socialise in the village.</li> <li>• Some pavements are too narrow for mobility scooters or <u>zimmers</u> to easily go along (Mauchline road near zebra crossing)</li> <li>• <u>More disabled parking bays required</u></li> </ul>

Example: Extract from an EqIA prepared for a Street Design Project

# CDM Duties

- ▶ CDM roles should be clearly identified on the application
  - ▶ If an individual is named, their organisation should be referenced – i.e 'XX on behalf of YY'
- ▶ The PD and Designers have a duty to manage risk via the ERIC principles
  - ▶ Eliminate
  - ▶ Reduce
  - ▶ Inform
  - ▶ Control
- ▶ Done via annotations on drawings, risk registers, technical notes, etc
- ▶ Often relates to utilities, ground conditions, hazardous / special waste, etc
- ▶ Note that Funder is not a recognised CDM role however we are still looking for projects, applicants and submissions to be giving us confidence that CDM duties are being fulfilled

# Summary

- ▶ Sustrans, as funder, want to work with partners, not against
- ▶ The more consistency across the board, the better and easier for everyone
- ▶ The updated guidance contains all the information required to support preparation of a good application
- ▶ Sustrans can provide support, through the correct channels, where needed



Any  
questions?



Sustrans is the charity making it easier for people to walk and cycle.

We connect people and places, create liveable neighbourhoods, transform the school run and deliver a happier, healthier commute.

Join us on our journey.

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