User guidance:

- The first section of this form guides users through considering major areas where emissions are likely to occur. If emissions are impacted in a way not covered by these categories, please identify this at the bottom of the section
- The first section should be filled as such:
  - ***Impact***: identify, in relation to each area, whether the decision of the proposal does the following: *reduces emissions*, *increases emissions*, or has *no impact on emissions*. If it is uncertain this section can be labelled *impact unknown*
  - If ***no impact on emissions*** is identified: no further detail is needed for this area, but can be added if relevant (e.g. if efforts have been made to mitigate emissions in this area.)
  - ***Describe impacts or potential impacts on emissions***: two sections deal respectively with emissions from the Council (including those of contractors), and emissions across Rotherham as a whole. In both sections please explain any factors that are likely to reduce or increase emissions. If ***impact unknown*** has been selected, then identify the area of uncertainty and outline known variables that may affect impacts.
  - In most cases there is no need to quantify the emission impact of an area after outlining the factors that may reduce or increase emissions. In some cases, however, this may be desirable if factors can be reduced to a small number of known variables (e.g. if an emission impact is attached to a known or estimated quantity of fuel consumed).
  - ***Describe any measures to mitigate emission impact:*** regardless of the emission impact, in many cases steps should be taken in order to reduce mitigate all emissions associated with each area as far as possible; these steps can be outlined here (For example: if a proposal is likely to increase emissions but practices or materials have been adopted in order to reduce this overall impact, this would be described here).
  - ***Outline any monitoring of emission impacts that will be carried out:*** in this section outline any steps taken to monitor emission levels, or steps taken to monitor the factors that are expected to increase or reduce emission levels (for example, if waste or transport levels are being monitored this would be described here)
- A ***summary paragraph*** outlining the likely overall impacts of the proposal/decision on emissions should then be completed - this is not required if the proposal/decision has no impact across all areas.
- The supporting information section should be filled as followed:
  - Author/completing officer
  - ***Research, data, or information*** may refer to datasets, background documents, literature, consultations, or other data-gathering exercise. These should also be added to the ***supporting documents*** section of the cabinet report

---

- Carbon Impact Assessments are to be appended to the associated cabinet reports
- Prior to publishing reports, Carbon Impact Assessments should be sent to climate@rotherham.gov.uk for feedback
- Report authors may also use the above email address to direct any further queries or to access further support regarding completing the assessment

Will the decision/proposal impact…	Impact	If an impact or potential impacts are identified			
		Describe impacts or potential impacts on emissions from the Council and its contractors.	Describe impact or potential impacts on emissions across Rotherham as a whole.	Describe any measures to mitigate emission impacts	Outline any monitoring of emission impacts that will be carried out
Emissions from non-domestic buildings?	No impact				
Emissions from transport?	Impact unknown	Additional emissions associated with travel related to the development and construction of the projects can be expected	Traffic calming measures as at Greasbrough have complex and conflicting impacts – per vehicle emissions tend to increase but impacts on traffic volume and routing typically offset these. These factors, combined with low levels of traffic in the streets to be treated, and the short length of streets impacted, mean the impact on emissions is uncertain but likely to be small. Similar considerations apply to the signals at Hellaby – individual vehicles having to stop and start at signals would increase emissions, but most vehicles would not be impacted by the crossing (as signals would be at green) any impacts would	None.	Given small impacts and infeasibility of monitoring carbon emissions arising from small scale traffic interventions, no monitoring is proposed.

			be over a very short length of road. Emissions from traffic could be expected to increase but to an unquantifiable small degree. Increased walking and improved access to bus stops may reduce emissions if this reduces car use but the effect of a single crossing is likely to be small in this regard.		
Emissions from waste, or the quantity of waste itself?	Increase emissions	Most schemes will result in excavations and/or disposal of materials as part of construction, with consequential one-off increase in waste and associated emissions. Projects not sufficiently advanced to provide more detailed information at this stage.	No impact expected.	Scheme PMs will be expected to provide estimates of carbon emissions associated with construction of schemes. Scheme PMs will be expected to work with designers and contractors to ensure carbon emissions minimised as far as practicable, including actively seeking opportunities to cut emissions from existing operation.	
Emissions from housing and domestic buildings?	No impact				

Emissions from construction and/or development?	Increase emissions	All highway schemes have construction emissions arising from the supply, installation, maintenance and operation of the schemes. The scale and nature of these cannot be confirmed until schemes are identified and more developed.	No impact expected beyond the contribution from RMBC and its contractors.	Scheme PMs will be expected to provide estimates of carbon emissions associated with construction and operation of schemes. Scheme PMs will be expected to work with designers and contractors to ensure carbon emissions minimised as far as practicable, including actively seeking opportunities to cut emissions from existing operation.	
Carbon capture (e.g. through trees)?	None	No impact expected.	No impact expected.	Not applicable.	Not applicable.

Identify any emission impacts associated with this decision that have not been covered by the above fields:

Operation and maintenance of traffic signals can be expected to result in a small increase in carbon emissions. Power consumption associated with the signals is estimated 2,000 kWh p.a., resulting in approximately 350 kg of CO_2 emissions p.a. at 2022 UK average carbon intensity of electricity generation of 182 gCO_2/kWh.

Please provide a summary of all impacts and mitigation/monitoring measures:

In summary, the following impacts are expected, with the scale and balance of emissions unknown until projects are further developed -

- A one-off increase in emissions associated with development and construction of the projects;

- An ongoing increase in emissions associated with the maintenance and operation of the projects; and,
- Potential but unquantifiable change in emissions from transport resulting from the schemes.

The increases associated development, construction, maintenance and operation reflect the systemic nature of the carbon emissions problem; whilst the energy and construction systems are emitters of carbon, any additional activity utilising these systems can be expected to result in increases in emissions. Some changes in emissions from traffic can be expected as a consequence of the proposals, but the balance of these changes is complex and impracticable to quantify, but is expected to be very small on account of impacting low volumes of traffic over very short distances.

The changes are thought likely to be very small in the context of overall transport emissions in Rotherham, and very small in the context of the NZ2030 and NZ2040 targets, and also remaining carbon budgets.

Mitigation will principally consist of estimate of carbon emissions being prepared as schemes are developed, PMs being required to ensure emissions are reduced as far as practicable in the design and construction of the projects, and this feeding into scheme prioritisation.

Supporting information:	
Completed by: (Name, title, and service area/directorate).	Nat Porter Interim Group Lead, Transport Planning Policy and Programmes Transportation Infrastructure Service Regeneration & Environment
Please outline any research, data, or information used to complete this [form].	Estimates of power consumption at signals from UKERC 'Quick Hits – 3. Traffic Signals (2006), adjusted in light of local officer experience. UK Electricity Carbon Intensity from National Grid. Local Transport Note 1/07 - Traffic Calming
If quantities of emissions are relevant to and have been used in this form please identify which conversion factors have been used to quantify impacts.	Carbon intensity of electricity taken to be 182 g / kWh (2022)
Tracking [to be completed by Policy Support / Climate Champions]	CIA054