

CARBON DIOXIDE PIPELINE ROUTE OPTIONS APPRAISAL PROCESS

How we'll determine the route of the pipeline

To determine the preferred route for which we will seek consent, we are undertaking a three-stage approach to identifying and appraising potential route options.

STAGE 1 STRATEGIC OPTIONS



Launch (October 2020)

Identifying broad 'strategic corridors' between Stanlow Refinery and Connah's Quay

STAGE 2 ROUTING OPTIONS



Non-Statutory Consultation (Spring 2021)

Identifying more defined route corridors (typically 100-200 metres wide) within which the pipeline could run.

STAGE 3 PREFERRED ROUTE



Statutory Consultation (Autumn 2021)

Identifying a preferred route (typically about 30m wide to allow space for construction and then ongoing maintenance of the pipeline).

At each stage of the appraisal we will narrow down the options by applying a series of 'guiding principles' which we will use to compare the relative merits of each option. These guiding principles will consider environmental, engineering, planning and social/community issues.

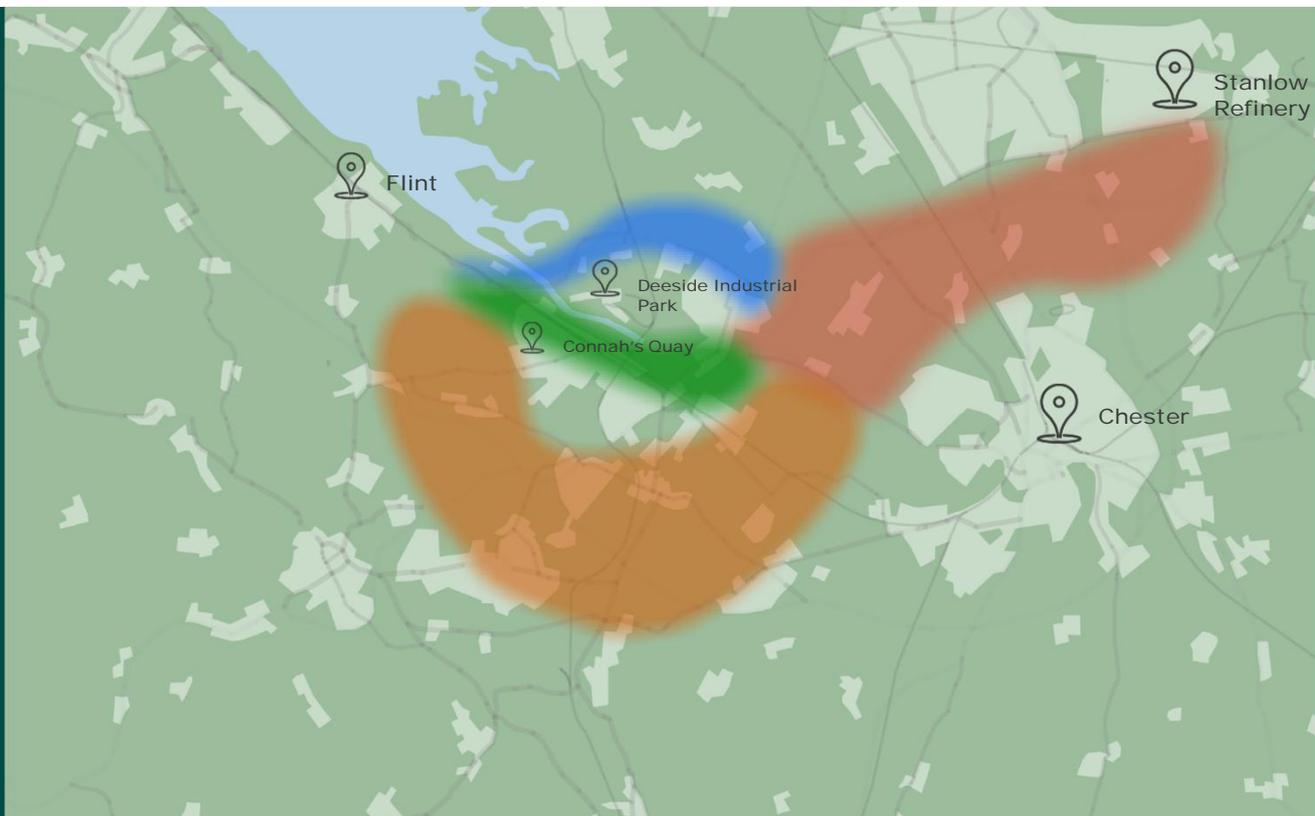
Our Strategic Corridor Options (Stage 1)

We have started the first phase of the options appraisal by defining four broad strategic corridors.

The first of the four strategic corridors is the 'core' corridor (shaded red). The core corridor runs between Stanlow Refinery and an area just beyond the border between England and Wales. It is within this core corridor that the first section of the new carbon dioxide (CO₂) pipeline would be constructed.

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At this point, the core corridor can be seen to split into three distinct corridors, one of which would be used to complete the link to the existing infrastructure west of Connah's Quay:

- § 'northern' corridor (shaded blue) – which passes around the northern edge of the Deeside Industrial Park and crosses the River Dee near Flintshire Bridge;
- § 'central' corridor (shaded green) – which passes between Deeside and Queensferry Industrial Parks, crossing the River Dee and running parallel to the railway; and
- § 'southern' corridor (shaded orange) - which crosses the River Dee east of Sandycroft and passes south of both the Deeside and Queensferry Industrial Parks and several other settlements.

It is important to note that these strategic corridors define approximate extents of the appraisal study area. As we continue to define and appraise route options, our guiding principles will require that, wherever possible, routes are designed to avoid passing directly through centres of dense population as well as significant environmental features.

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We are proposing that the following guiding principles are used to compare the relative merits of any options developed at each stage of the process. Any options should:

- 1. Seek to maximise the opportunity to substantially reduce CO₂ emissions from industry within North West England and North Wales by ensuring it provides the opportunity for all major industrial emitters to connect to the pipeline.**
- 2. Minimise impacts upon the environment and local amenity wherever possible, particularly in relation to internationally and nationally designated sites.**
- 3. Ensure the transportation of the CO₂ is undertaken safely and securely.**
- 4. Optimise the potential local socio-economic benefits within the region.**
- 5. Utilise existing infrastructure and easements where possible.**
- 6. Be technically viable and constructible with minimum disruption.**
- 7. Be cost-effective.**

At this early stage in the appraisal process, initial indications are that the southern corridor option aligns best with the guiding principles as it:

- § **is more likely to provide route options which have a less direct impact upon international and national environmental designations located within the River Dee Estuary;**
- § **is likely to be the least complex to build and safest route to construct on account of having fewer complex crossings (waterbodies, roads, railway lines); and**
- § **will offer the most cost-effective solution, based on the fact it would be the least complex to build.**



We will however continue to gather further information and undertake further analysis on each of the strategic corridors in the coming months. We will then present the findings of our stage 1 and 2 appraisals during our non statutory consultation in spring 2021 and seek your views on our findings.