

Beneficial Use – Disposal Site Designation

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International Obligations

The London Convention and Protocol

CONVENTION ON THE PREVENTION OF MARINE POLLUTION BY DUMPING OF WASTES AND OTHER MATTER

- ❖ The London Convention 1972 (IMO)
- ❖ The London Protocol (1993)



Fifty years of ocean protection

Major milestones since adoption of the London Convention in 1972 regulating dumping at sea

Adoption of **London Convention**: Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter, 1972. One of the first global treaties aimed at protecting the marine environment from human activities. The London Convention enters into force in 1975.

London Protocol is adopted to update the Convention, bringing in **precautionary approach**. All dumping of waste at sea is **prohibited**, except for those on a “reverse list”. The Protocol enters into force in 2006.

Regulating climate change mitigation technologies: marine geoengineering, which can involve interventions in the marine environment in order to counteract climate change. A resolution adopted in 2010 is followed by an amendment to the London Protocol in 2013, to include marine geoengineering activities. The amendment allows ocean fertilization activities to be permitted for research purposes only, and enables other marine geoengineering activities to be regulated in future.

Proposal to **remove sewage sludge** from list of permitted materials for dumping is presented for adoption at October 2022 meeting of Contracting Parties to London Protocol.

Pre 1970 ——— 1980s ——— 1990s ——— 2000s ——— 2010s ——— 2020s

Increased environmental awareness. Dumping of wastes at sea recognized as contributing to degradation of the oceans.

Dredging – most of the permits for dumping at sea relate to dredged material. The potential impact on the receiving environment has to be evaluated, in line with the Waste Assessment Guidelines, before a permit for dumping is issued.

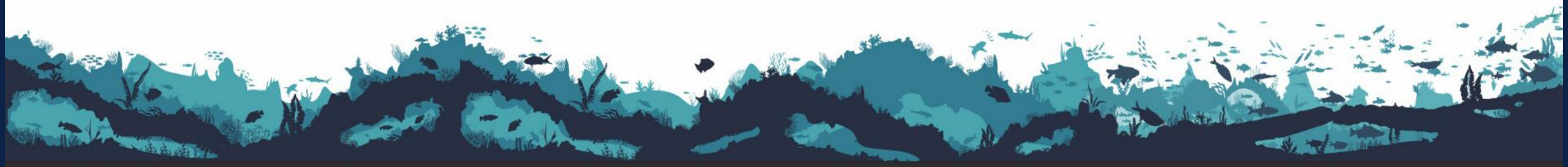
Comprehensive ban on dumping of **radioactive waste** at sea adopted via amendment to the London Convention. The amendment enters into force in 1994.

Disposal of **industrial waste** at sea prohibited and fully phased out by 1996, via amendment to the London Convention.

Incineration of wastes at sea is banned via amendment to the London Convention, from 1994.

Regulating climate change mitigation technologies: carbon capture and storage. An amendment in 2006 to the London Protocol provides the basis in international environmental law to allow for CO₂ storage beneath the seabed, when it is safe to do so. This is seen by the Intergovernmental Panel on Climate Change (IPCC) as a short-term technological option for reducing net CO₂ emissions to the atmosphere.

A related amendment adopted in 2009 enables CO₂ streams to be exported for CCS purposes, which can be provisionally applied following a decision in 2019.



International Obligations



The OSPAR Convention (1992)

THE CONVENTION FOR THE PROTECTION OF THE MARINE ENVIRONMENT OF THE NORTH-EAST ATLANTIC

Prevention and elimination of pollution
from land-based sources
ANNEX I

Prevention and elimination of pollution by
dumping or incineration
ANNEX II

Prevention and elimination of pollution
from offshore sources
ANNEX III

Assessment of the quality of the marine
environment
ANNEX IV

Protection and conservation of the ecosystems
and biological diversity of the maritime area
ANNEX V

Role of MMO

Regulation

- ❖ The Marine and Coastal Access Act 2009
- ❖ The MMO is responsible for marine licensing in English waters and for Northern Ireland offshore waters.
- ❖ The MMO is the regulator for disposal sites

Role of Cefas

Advice

- ❖ Provide **independent scientific / technical advice**, ensuring:
 - **Environmental risks**
 - **Evidence of impact**
 - **Robust information**

- ❖ Our contract is to provide 'on demand' and case specific independent advice to the MMO to support their decision making.

Role of Cefas

What advice do we provide?



Pre-Application



Application



Post-Application



Advice Teams



Role of Cefas

Reporting

- ❖ The LP and OSPAR require that contracting parties report to both conventions annually on disposal activities
- ❖ Cefas facilitate this reporting on behalf of Defra
- ❖ Parties must report on the volumes disposed, the areas of origin, the physico-chemical properties and many other details

UK Disposal Site Layer



<https://data.cefas.co.uk/view/407>

Identifying and characterising disposal sites

Identify need

❖ Waste hierarchy

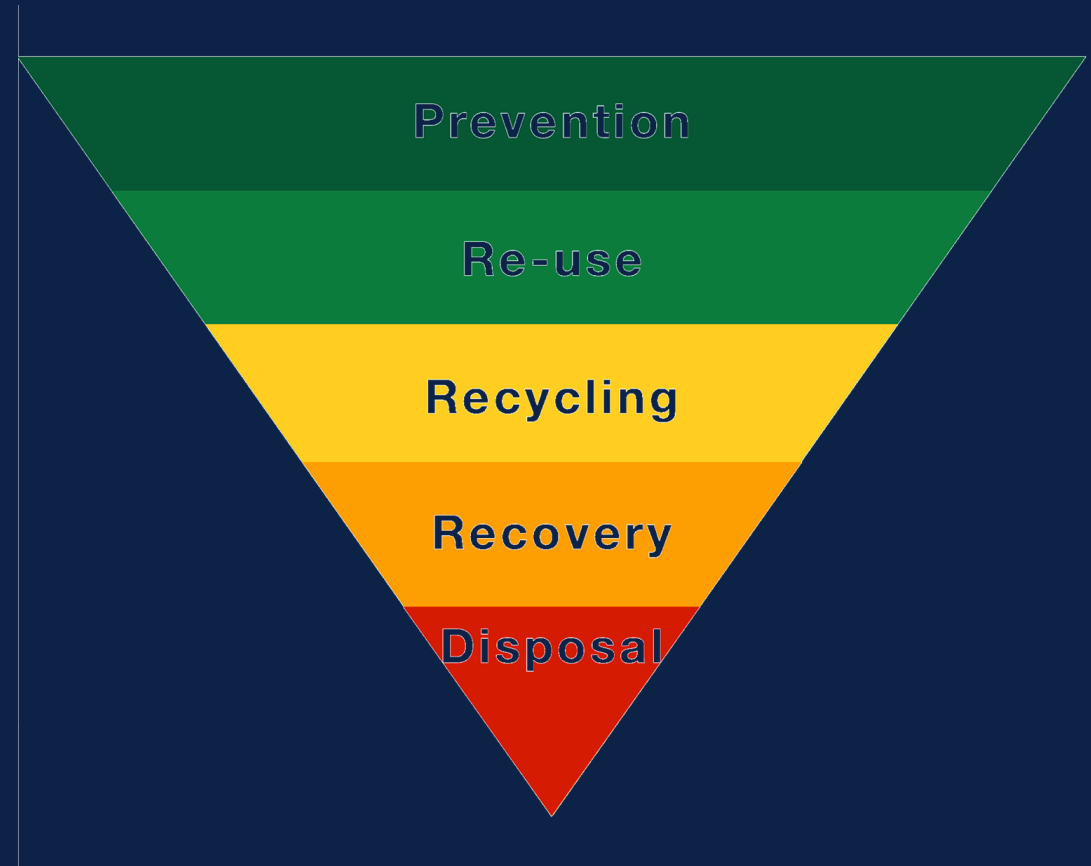
❖ Is it for...

Beach nourishment?

Land reclamation?

Coastal defences?

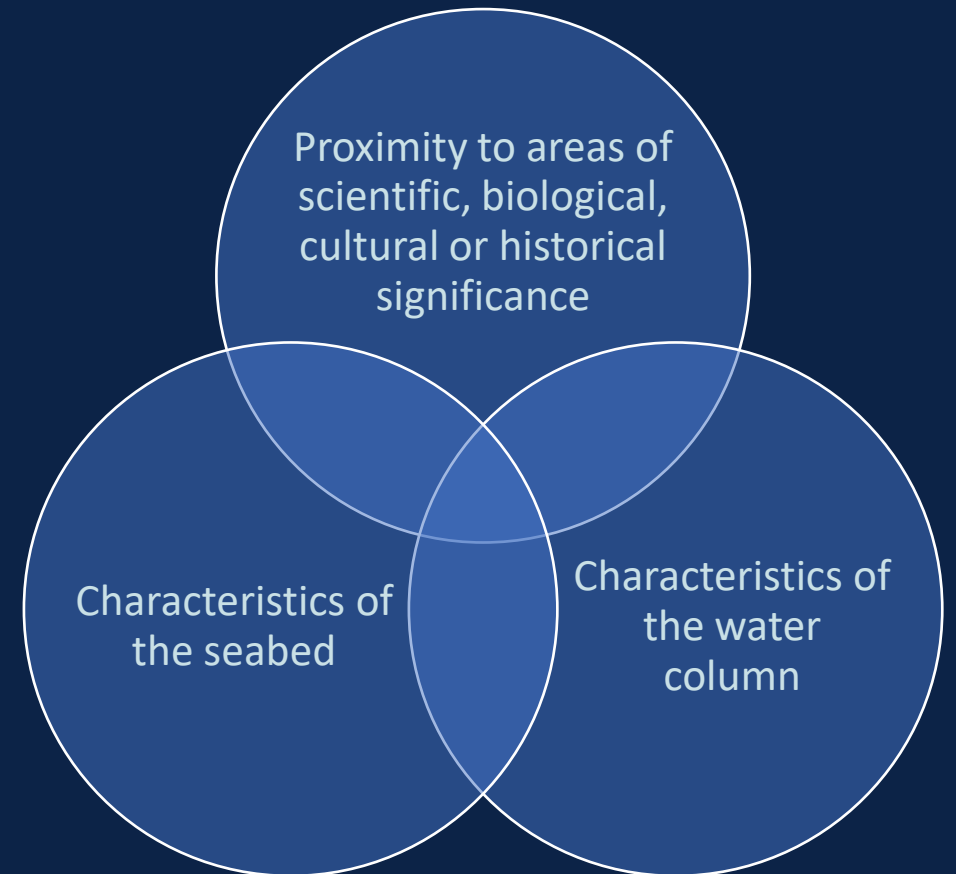
❖ Is it above or below mean high water springs?



Identifying and characterising disposal sites

Characterise

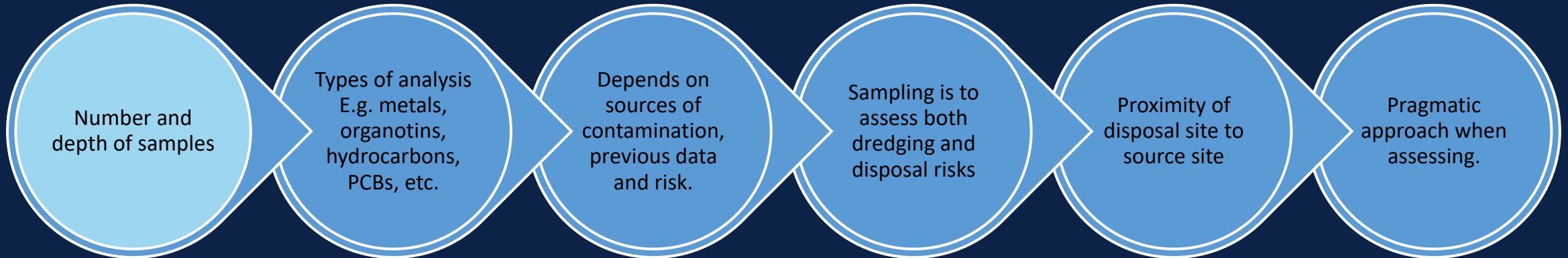
- ❖ A site, once identified by the applicant, should be characterised.
 - ❖ This can range from simply looking at particle size analysis data, to the applicant preparing a full-length characterisation report.
- ❖ Required under OSPAR and LP.
 - Why? Individual risk assessment for each application plus long-term trend analysis
 - Recommend three sets of information.



Identifying and characterising disposal sites

Characterise - Sample plan

Dredged Area (m ²)	Number of Stations (locations)
<10 000	1–3
10 000 - 50 000	4–8
50 000 - 100 000	9–10
>100 000	extra 5 per 100 000 m ²



Amount dredged (m ³)	Number of Samples
Up to 25 000	3
25 000 - 100 000	4–6
100 000 - 500 000	7–15
500 000 - 2 000 000	16–30
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Trace metals: Arsenic, cadmium, chromium, copper, mercury, nickel, lead and zinc

Organotins: Dibutyltin, tributyltin

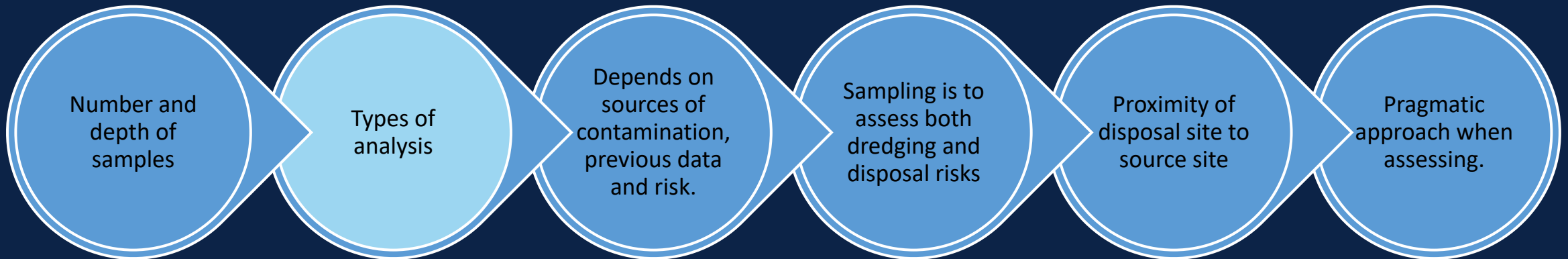
Less often

Black Carbon Biological contaminants

Radionuclides

Toxicity/Bioassays

Invasive Non-Native Species



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Polycyclic aromatic hydrocarbons (PAHs)

Polychlorinated biphenyls (PCBs)

Polybrominated diphenyl ethers (PBDEs)

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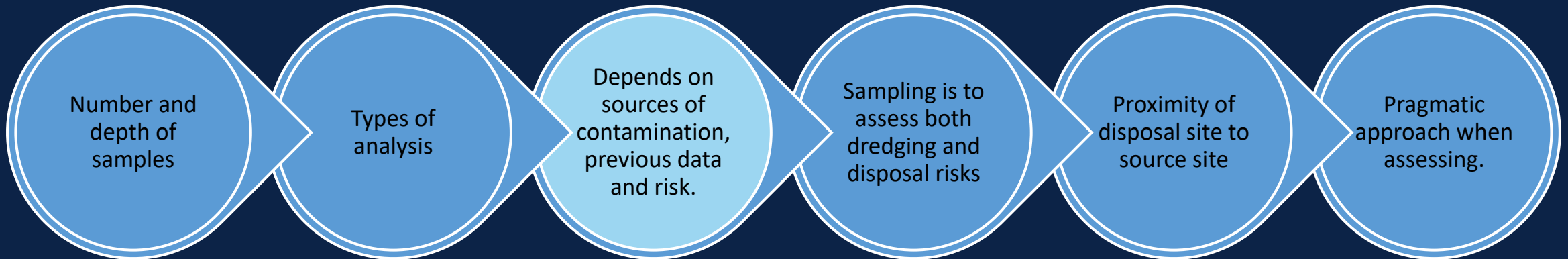
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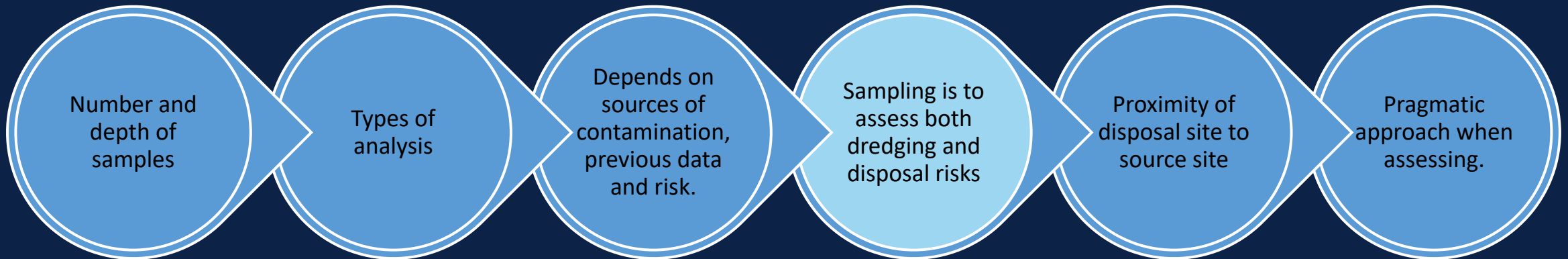
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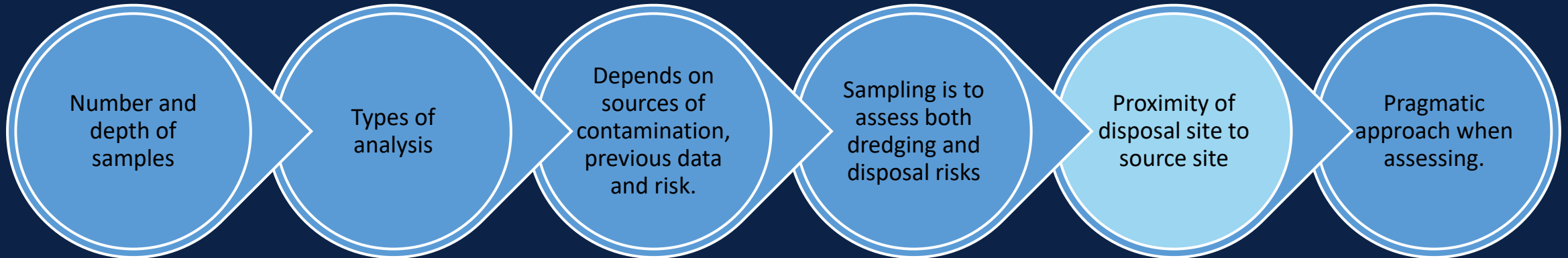
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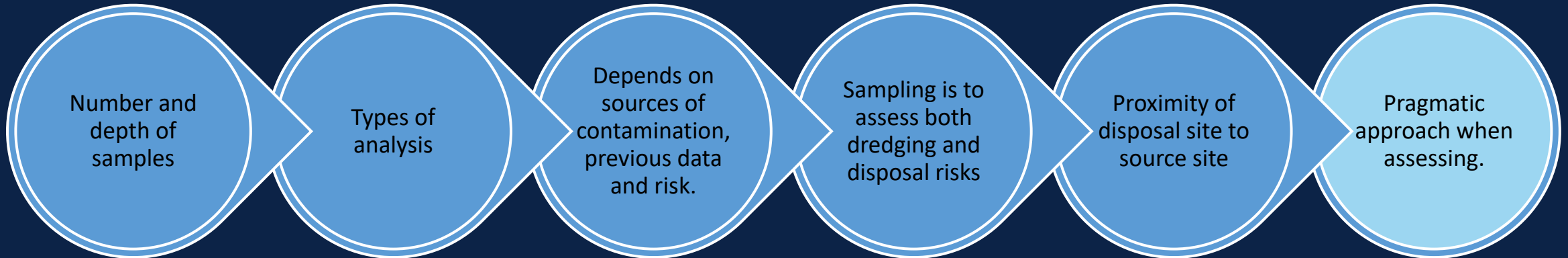
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Designating disposal sites

Consideration and evaluation – Marine Licence application

- ❖ Is the evidence provided sufficient to judge whether the site is acceptable?
- ❖ Additional advice may be requested.
 -  Natural England if the site is near a Marine Protected Area
 -  Cefas shellfish if next to fishing grounds
 -  Physical Process advisors if sediment modelling is part of the Application
- ❖ Marine Licence conditions
 -  Frequency of sampling | Volumes | Timing restrictions

Designating disposal sites

Designation process

- ❖ No significant adverse effects on the marine environment
- ❖ Sufficiently characterised and matches the source material particle size
- ❖ Shapefile for the beneficial use disposal site must be submitted to the MMO

Existing Sites: Open and disused disposal sites must not overlap.

Statutory designations: Sites should not be designated within statutory designations (MPAs) unless there is imperative overriding interest.

Areas of Interest: Sites around, near or within areas of specific interest (e.g. offshore infrastructure) need additional consideration.

Beneficial Use – Disposal Sites

Monitoring / Post-application

- ❖ Some licences have the requirement for monitoring of both the beneficial use disposal site and source sites
- ❖ How do we know that the beneficial use sites are actually beneficial?
- ❖ MMO can undertake compliance if they wish to



Beneficial Use – Disposal Sites

Post-designation

Disused: A disposal site is considered disused when no activity has taken place there for a period of 5 years.

Closed: A site becomes closed when no activity has occurred for 10 years. However, a site can also be closed at any time at the direction of the regulator.

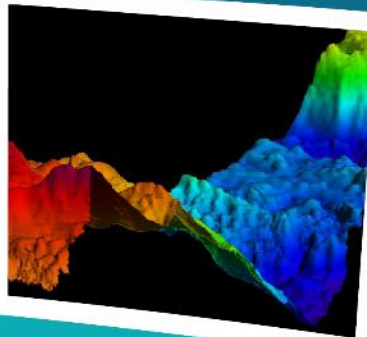
Multiple operators: It is viable that multiple operators use a single beneficial disposal site, as long as the source material is suitable.

Thank you for listening

To find out more please contact:
ryan.alexander@cefas.gov.uk

To learn about Cefas scan the QR
code or visit
linktr.ee/CefasGovUK

SCAN ME



Centre for Environment,
Fisheries & Aquaculture
Science



Cefas