Causeway Coast & Glens Borough Council

Title of Report:	**CONSTRUCTION OF IN-VESSEL COMPOSTING (IVC) FACILITY AT LETTERLOAN COMPOSTING FACILITY**
Committee Report Submitted To:	**ENVIRONMENTAL SERVICES COMMITTEE**
Date of Meeting:	**13th APRIL 2021**
For Decision or For Information	**FOR DECISION**

Linkage to Council Strategy (2019-23)	
Strategic Theme	Protecting and enhancing or environment and assets
Outcome	
Lead Officer	Head of Operations

Budgetary Considerations	
Cost of Proposal	c £30k for Stage 1
Included in Current Year Estimates	N/A
Capital/Revenue	N/A
Code	N/A
Staffing Costs	N/A

Screening Requirements	Required for new or revised Policies, Plans, Strategies or Service Delivery Proposals.		
Section 75 Screening	Screening Completed:	N/A	Date:
	EQIA Required and Completed:	N/A	Date:
Rural Needs Assessment (RNA)	Screening Completed	N/A	Date:
	RNA Required and Completed:	N/A	Date:
Data Protection Impact Assessment (DPIA)	Screening Completed:	N/A	Date:
	DPIA Required and Completed:	N/A	Date:

1.0 Purpose of Report

1.1 The purpose of this report is to seek permission to proceed to Stage 1 (scoping, feasibility and outline business case) of the Capital Programme to ascertain the viability of constructing an in-vessel composting (IVC) facility at the council-owned Letterloan Composting Facility, Letterloan Road, Macosquin.

2.0 Background

2.1 In 2019-20, council collected 12,939 tonnes of mixed food and garden waste via its kerbside household brown bin collection service.

2.2 The mixed food and garden waste collected is currently bulked up at Crosstagherty Waste Handling & Transfer Facility and Letterloan Composting Facility. The waste is then transferred to an organics recycling facility outside Belfast where it is processed into compost that is used for agricultural and horticultural purposes.

2.3 The cost to council to transport and process kerbside collected organic waste to produce compost is c.£750,000 per annum.

2.4 Council does not receive any income from sale of the product produced by the external contractor.

3.0 Information

3.1 IVC can be categorised into six types: containers, silos, agitated bays, tunnels, rotating drums and enclosed halls.

3.2 IVC can be used to treat food and garden waste mixtures. IVC systems ensure that composting takes place in an enclosed environment, with accurate temperature control and monitoring.

3.3 There are 4 main stages of IVC as detailed below

Stage 1

The food waste, which comes primarily from brown bins, council waste collection, either separate or already mixed with garden waste, as well as commercial and industrial sources, is delivered to an enclosed reception area. It is then shredded to a uniform size and loaded into what is known as the first 'barrier', which will be a bay/tunnel etc depending on the system used. All the material delivered to a facility, plus the first barrier stage, is considered a 'dirty area' under Animal By-Products Legislation (ABPR). The regulations ensure that strict procedures are in place to prevent cross-contamination of 'clean areas' (where product is processed and stored) from 'dirty areas'. The composting process is kick-started by naturally occurring micro-organisms already in the waste. They break down the material, releasing the nutrients and in doing so increase the

temperature to the 60-70ºC needed to kill pathogens and weed seeds, and meet the regulations for processing ABPR material.

Stage 2

After the first stage (which can take between seven days and three weeks), the material is transferred to the second 'barrier', where the composting process continues, usually for a similar duration. Processing in 2 stages ensures that all parts of the composting mass reaches the required temperature. The oxygen level, moisture and temperature are carefully monitored and controlled during both composting stages to ensure the material is fully sanitised.

Stage 3

Once the sanitisation process is complete the compost is left to mature in an open windrow or an enclosed area for approximately 10-14 weeks to ensure stabilisation.

Stage 4

Screening usually takes place pre or post maturation, to produce a range of product grades suitable for various end uses such as soil conditioning. Often the oversize is fed back into the processing system to break down fully. Facilities which process to BSI PAS 100 and the Quality Protocol for compost produce products which are no longer considered a waste by the Northern Ireland Environment Agency.

3.4 Council already carries out stages 3 and 4 for green waste only which is received at Household Recycling Centres.

3.5 The proposal at Letterloan is to construct a facility to carry out stages 1 and 2. This would enable Council to treat kerbside collected biowaste (brown bin) rather than using a contractor.

3.6 The land is available at Letterloan to construct an IVC facility.

3.7 Compost produced can be used in a range of places including in gardens, on brownfield sites, landscaping and agriculture.

3.8 A primary environmental advantage of in-vessel composting is the reduction of organic material disposed of at landfill.

4.0 Resource

4.1 Resource is required to assess and examine the viability for council to construct and operate an in-vessel composting facility on the site of Letterloan Composting Facility.

4.2 Stage 1 assessment will consist of working with the in-house infrastructure project team, securing professional advice and potentially visiting facilities in the UK and Ireland similar to that which may be constructed at Letterloan Composting Facility.

5.0 Recommendation

It is recommended the Environmental Services Committee approve the progression of this project to Stage 1 (scoping, feasibility and outline business case) of the Capital Programme.