

## ROUTE OPTIMISATION UPDATE

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### 1.0 INTRODUCTION

- 1.1 The purpose of this report is to provide Members with an update on the development of the route optimisation project following the report to this Committee on the same subject in March.

### 2.0 RECOMMENDATIONS

- 2.1 It is recommended that Members of the Environment, Development and Infrastructure Committee:-
- Note the progress with the Route Optimisation project;
  - Agree that a Member Seminar will be arranged in the Autumn to present the system and possible scenarios; and
  - Note that a further update report will be brought back to the December Environment, Development and Infrastructure Committee meeting.

### 3.0 DETAIL

#### Background

- 3.1 The Council has appointed Webaspx, a leading waste management software solutions company, to provide us with a route optimisation solution, following an open tender process which ran in 2022.
- 3.2 A £100,000 budget was previously approved for this project. The funding can be used to fund the start-up costs and a large part of the first year software support, with the remaining software support costs being absorbed within current budgets. The contracted upfront costs are approximately £70k with an annual service cost of approximately £50k. The contract is a rolling contract for up to 5 years. It is anticipated that Co2 savings will be made which will not be known until after full implementation.
- 3.3 As the project develops we will consider options for funding the remainder of the agreed 5 year contract, potentially based on efficiencies realised as a

result of having the system in place.

## Progress

- 3.4 Since the report to the Environment, Development and Infrastructure Committee in March, the project is now underway, using the Council's normal project governance methodology. The Head of Roads and Infrastructure is the Senior Responsible Officer for the project, and a project team with officers from across the Council has been established and meets on a weekly basis. Different levels of input will be required from officers across the lifetime of the project – there is no specific dedicated resource working exclusively on route optimisation.
- 3.5 In line with good practice for contract management, regular meetings are in place between Webaspx and the Council's Project Team. The project will go forward in phases. The first phase is setting up the Easy Route software, creating the detailed digital model of our road network, our domestic bin collection, disposal operation and is being reported as Phase One. Thereafter there will be a second phase to set up and utilise the in-cab or Digital Depot technology and to consider how this integrates with existing customer service systems.
- 3.6 The below provides Members with an indicative outline works programme for Phase One:

<b>Route optimisation Phase One – Easy Route software</b>			
<b>Title</b>	<b>Description</b>	<b>Date</b>	<b>Status</b>
<b>Inception</b>			
Inception meeting	Agree requirements/ constraints/ deadlines	March 2023	Complete
<b>Data</b>			
Roads	OS data on road network	April 2023	Complete
Properties	UPRN information on all 48,000 households	April 2023	Complete
Routes	Uploading existing bin route information	April 2023	Complete
Resources	Information on vehicles to cross reference with route and property data	April 2023	Complete
Performance	Weighbridge information from the different off-takers	April 2023	Complete

Merging data	Cleansing and formatting various data sets	May 2023	Ongoing at the time of writing
<b>Model development and review</b>			
Initial build	Webaspx build software installation of EasyRoute	May 2023	On track
Training	ABC staff training	June 2023	On track
Model as-is routes	Create calibrated models of current collections across all areas	June 2023	On track
Review as-is routes	Ensure As-Is models reflect current collections	July 2023	On track
Tactical modelling	Model routes and other options against different scenarios	August 2023	On track  NOTE: possible Member Seminar at this stage
Review tactical modelling	Review remodelled routes	September 2023	On track
Operational modelling	Create fully implementable model(s) for each scenario	October 2023	On track
Operational review	Review and revise possible new designs	October 2023	On track
<b>Decision gateway</b>			
Decision stage	Determine next steps and lead in to Phase Two	December 2023	On track

## 4.0 CONCLUSION

- 4.1 The new route optimisation system is a powerful tool and, once built will provide opportunities to model different options, with this firstly being used for the bin collection routes. Revised routes will be able to be planned in a few hours whereas this currently can take several weeks due to the complexity of the modelling.
- 4.2 The initial data upload, review, cleansing stage is very much an iterative process that requires a reasonable resource commitment from the Council, particularly given the different waste models used across the area.

## **5.0 IMPLICATIONS**

- 5.1 Policy – There are no direct policy implications arising from this report.
- 5.2 Financial – This project is funded from a previous funding allocated by the Council.
- 5.3 Legal – None known.
- 5.4 HR – None known.
- 5.5 Fairer Scotland Duty:
  - 5.5.1 Equalities - protected characteristics – works from this project will be accompanied by a socio and economic impact assessment.
  - 5.5.2 Socio-economic Duty – none arising from this report.
  - 5.5.3 Islands – this project will look at both the mainland and islands and there is not deemed to be any adverse impact to island communities from this work.
- 5.6 Climate Change – There is potential to reduce the mileage covered by some vehicles, which would help to work towards reducing the Council’s carbon footprint. It is anticipated this will result in CO2 savings however this will not be fully known until the system is fully implemented.
- 5.7 Risk – None arising from this report.
- 5.8 Customer Service – None arising from this report.

**Executive Director with responsibility for Roads and Infrastructure Services:**  
Kirsty Flanagan

**Head of Roads and Infrastructure:** Jim Smith

**Policy Lead for Roads and Transport:** Councillor Andrew Kain

May 2023

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