

PROJECT BRIEF

South Derbyshire District Council

Project: Route Optimisation

Transformation Theme: Process

Date: 24th August 2020

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Version Control

Version	Description of version	Effective Date
0.1	DRAFT	24 th August 2020
1.1,1.2	Review by Business Change Team and Head of Operational Services	27 th August 2020
1.3	Case presented to Environmental & Development Services Committee	15 th September 2020

Approvals

Approved by	Date
Transformation Steering Group	

Associated Documentation

Description of Documentation	
Transformation and Business Change Plan 2020-2024	
Business Change Annual Work Programme 2020-2024	

Once your Project Brief is complete check the document against the following Quality Criteria:

- It is brief as its purpose, at this point, is to provide a firm basis on which to initiate a project.
- The Project Brief accurately reflects the project mandate and the requirements of the business and the users
- The project approach considers a range of solutions such as: bespoke or off-the-shelf; contracted out or developed in-house; designed from new or modified existing product etc.
- The project approach has been selected which maximises the chance of achieving overall success for the project
- The project objectives, project approach and strategies are consistent with the organization’s corporate social responsibility directive
- The project objectives are Specific, Measurable, Achievable, Realistic and Time-bound (SMART).

1.0 Corporate Governance

The project outcomes contribute towards the corporate plan objectives identified below:

Corporate Theme	Description	X
OUR ENVIRONMENT Keeping a clean, green District for future generations	Reduce waste and increase composting and recycling	X
	Reduce fly tipping and litter through education, engagement and zero tolerance enforcement action where appropriate	
	Enhance biodiversity across the District	
	Strive to make South Derbyshire District Council carbon neutral by 2030	X
	Work with residents, businesses, and partners to reduce their carbon footprint	
	Enhance the appeal of Swadlincote town centre as a place to visit	
	Improve public spaces to create an environment for people to enjoy	
OUR PEOPLE Working with communities and meeting the future needs of the District	With partners encourage independent living and keep residents healthy and happy in their homes.	
	Support and celebrate volunteering, community groups and the voluntary sector	
	Help tackle anti-social behaviour & crime through strong and proportionate action	
	Support social mobility to ensure people have the opportunity to access skilled jobs, higher and further education.	
	Have in place methods of communication that enables customers to provide and receive information.	
	Ensuring consistency in the way the Council deal with service users	
	Ensuring technology enables us to effectively connect with our communities.	
	Investing in our workforce	X
OUR FUTURE Growing our District and our skills bas	Attract and retain skilled jobs in the District	
	Support unemployed residents back into work	
	Encourage and support business development and new investment in the District	
	Enable the delivery of housing across all tenures to meet Local Plan targets	
	Influence the improvement of infrastructure to meet the demands of growth.	
	Provide modern ways of working that support the Council to deliver services to meet changing needs.	X
	Source appropriate commercial investment opportunities for the Council	X

2.0 Project Definition

2.1 Background

Operational Services currently provides household waste collection services to over 46,000 residential properties spanning 2300 streets across the District. The waste collection routes currently in operation were derived from analysis work carried out over six years ago, using basic analysis tools and specialist knowledge from the senior officers within the service. Since this work the District has grown by more than 5000 dwellings. The current rounds are calculated on a street basis, not individual property basis which does not provide the detailed information that is essential for a data-driven, customer focussed service.

In November 2017 a report was presented to Environmental and Development Services Committee and Finance and Management Committee which set out the impact District growth was having on the capacity for service delivery of waste collections and further resources were approved at this time. A further report is being presented to both Committees in September/October 2020 identifying the need for further operational growth. Route optimisation could delay the implementation of the increased costs of growth.

'Table 8: Housing Trajectory' of the Council's Housing Position Paper February 2020 states that over the current Local Plan period (up to 2028), District growth will continue with Net Projected Completions 2020/21 to 2027/28 predicted to provide an additional 7300 dwellings, with 5336 of these expected over the five-year supply period (2020/21 to 2024/25) To ensure that a resilient operating model is in place to resource these front-line waste and cleansing services, it has been identified a more sophisticated approach is needed to understand the impact of and meet the demands of growth, both in terms of ensuring adequate resources are available for the short-term, but also in data modelling and forecasting of demand for the medium/long-term.

Alongside the financial efficiencies, that a new operating model will bring, there are also the ambitions within the Corporate Plan which aim to reduce the carbon emissions the Council produces. A route optimisation solution will produce these optimal routes and reduce the environmental impact of the vehicles.

A project team has been formed to research the options for the use of route optimisation consultancy and route optimisation software which can modernise the service and use data to inform decisions, optimise service delivery and plan for future growth.

2.2 Project Objectives

The aim of the project is to baseline the current provision of household waste collections services, articulate a future operating model incorporating route optimisation software, procure and implement a solution to release efficiencies, make financial savings and provide modern ways of working that support the Council to deliver services to meet changing needs and growth across the District.

2.3 Desired Outcomes

The benefits of the project will be but are not limited to:

- Reduce the cost of vehicles by balancing rounds between vehicles and crew
- Cut the cost of fuel (and emission of CO2) by reducing vehicle miles by using software designing more efficient routes.
- Reduce the risk of disruption when introducing new services or changing rounds by using robust data models to design rounds that are achievable in practice.
- Plan rounds properly so that they perform better, reducing the cost of mop-ups rounds and ad-hoc jobs.
- Develop in-house skills to allow for future optimisation.
- Ensure an ongoing ability to keep routes optimised as District growth continues.
- Enhance processes within the Operational Services and Customer Services Teams.
- Improve performance management within the Operational Services Team
- Develop skills within the Operational Services Team
- Improve reporting and performance data to the organisation
- Deliver efficiencies across Waste Collection services, with possible expansion to street cleansing and grounds maintenance.
- Mitigate financial and reputational risk through better planning for growth.

2.4 Project scope and exclusions

The scope of this project of the route optimisation for household waste collections, explores other applications which use the Local Land and Property Gazetteer (LLPG) or derived from Geographical Information System (GIS) layers created to enhance the maintenance standards such as, gullies, grounds maintenance.

This type of route optimisation would not be deemed suitable for other service areas – housing repairs, planning etc.

2.5 Assumptions

Resource allocation or availability of appropriate skills.

Project teams always work under some limitations and restrictions, a balance will need to be struck between members of a virtual team who are contributing to the discussion and evaluation and their substantive responsibilities.

Current provision to customers will remain unchanged until completion.

Current operating model remains intact until new model is implemented.

No option shall be precluded on submission by any member of the project team, however only those identified as a viable business solution will be considered for implementation.

2.6 Stakeholders and Interfaces

Transformation Steering Group
 Customer Services
 Business Change, IT, Digital
 Operational Services
 Residents, Customers, Businesses.
 Service users
 Front-line employees

3.0 Outline Business Case

Why the project is needed:

The current methods available to carry out route optimisation for the household waste collection services would be the use of excel spreadsheets and route optimisation techniques known by the current Head of Service. To carry out this piece of work in house, existing staff would have to be trained on these techniques and this could take up to two months to complete. Once completed, this would not necessarily be the most optimal routes as it is very much a manual process. Therefore, more sophisticated tools should be considered, either through regular outsourcing of the task to a specialist supplier, or through a combination of outsourcing through initial consultancy to train staff and the procurement of a solution to enable the continuous improvement of the Service to adapt to change and growth

3.1 Option 1: One off consultancy

One off consultancy can be carried out to baseline the as-is of the household collections and to provide a recommendation for the best routes for the Council to adopt as of now. However, these routes will become out of date within a matter of weeks as new properties are being completed on a daily basis. The routes will be more efficient, but this does not represent good value for money as the data is flawed almost immediately.

This option is not recommended.

3.2 Option 2: Consultancy for recurring optimisation

A contractual arrangement for regular consultancy can be procured, to provide a regular update of the optimised routes. This could be carried out two or three times per financial year. This type of contract would be expensive and would also fail to enhance the skills and knowledge of staff within the service.

This option is not recommended.

3.3 Option 3: Purchase software (partial consultancy starting project) SDDC complete

Specialist consultants can be engaged to carry out the baseline of current provision (the As-Is), a full review of the As-Is as well as a tactical and operational reviews of the current service and then pass on these recommendations to Council staff to implement within the software and then refine the results. This approach comes with risk as currently there is little in the way of in-house skills in the use of route optimisation products. This could result in an initial software implementation that is not as effective as planned, and therefore not realising the most efficient routes straight away. Any changes to routes may result in some operational changes to the way waste collections are carried out and this disruption would need to be kept to a minimum.

This option is not recommended.

3.4 Option 4: Purchase software and full consultancy

Specialist consultants can be engaged to carry out the baseline of current provision (the As-Is), a full review of the As-Is as well as a tactical and operational reviews of the current service and then build the new models into the software whilst training officers fully. This option provides the most

secure route to a successful software implementation as it ensure the Council takes on the recommendations of the specialist consultancy as well as building up the skills within the Service to both operate the software, but also to observe the correct way to do so in a collaborative working arrangement.

In addition, the more refined use of property based data, which for the first time would be directly linked to the Council's LLPG matching to waste collection data, would be the first steps towards using data intelligence to best serve customers and provides the basis for enhancements to the Council's website, back office systems and Customer Relationship Management System (CRM) which will delivered over the next two years, but initially the website search for customers will be improved as part of this project through the improved data relating to individual household collections.

This is the recommended option.

3.5 Financial Assessment

The table below represents the additional investment required to deliver the preferred option highlighted above based on soft market engagement. An implementation fee of approximately £65,000 is payable in the financial year 2020-2021 then an additional £7,000 would be required each year of a five-year term for licencing, hosting, management, and support. If these figures increase significantly following the procurement process a further report to Finance and Management Committee will follow.

	2020/2021	2021/2022	2022/2023	2023/2024	2024/2025	Total
Software Implementation	£30,000					£30,000
Software Licencing and Maintenance		£7,000	£7,000	£7,000	£7,000	£28,000
Consultancy	£35,000					£35,000
Total	£65,000	£7,000	£7,000	£7,000	£7,000	£93,000

The total additional cost to the Council will be no more than £93,000

A breakdown of how the investment is profiled over the MTFP is shown below along with identified revenue budget savings and efficiency savings. An initial investment of approximately £65,000 will be needed to implement the software and receive expert consultancy to optimise the collection routes.

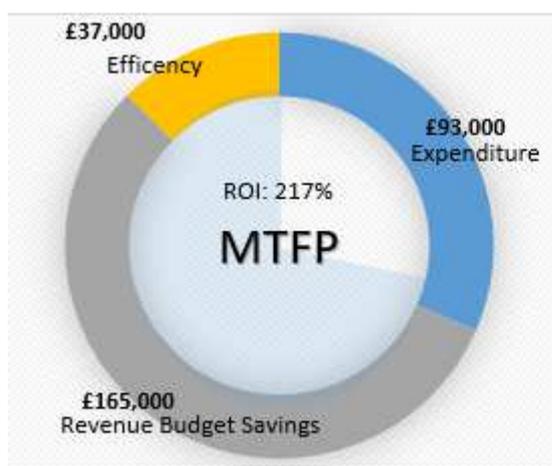
This will save approximately £8,500 every three years in officer time.

The revenue budget savings are made up from reductions of 12.5% on fuel cost and maintenance of vehicles which is the equivalent at time of writing to £33,000 per annum.

A further £4,000 efficiency saving will be realised by the mechanic posts.

	2020/21	2021/22	2022/2023	2023/2024	2024/2025	TOTAL
	Year 1	Year 2	Year 3	Year 4	Year 5	MFTP
Expenditure						
Implementation	£65,000					
Licence		£7,000	£7,000	£7,000	£7,000	
	£65,000	£7,000	£7,000	£7,000	£7,000	£93,000
Return						
Revenue Budget Savings	£33,000	£33,000	£33,000	£33,000	£33,000	£165,000
Efficiency Gains	£12,500	£4,000	£4,000	£12,500	£4,000	£37,000
Combined	£45,500	£37,000	£37,000	£45,500	£37,000	£202,000

ROI 217%



3.6 Value for Money

The recommended option 4 provides value for money as detailed below:

Economy – Gross revenue budget savings of £33,000 per year, through reduced fuel usage and maintenance costs. Figure is based on the percentage of the transport budget directly attributed to refuse collection vehicles.

Efficiency – the purpose of the software is to produce balanced collection rounds which are efficient and achievable by design with the lowest possible resource use.

Effectiveness - Case studies from other local authorities show a median efficiency saving of 12.5%. With some local authorities achieving direct savings on a reduction in vehicles and a total saving in excess of 20% of transport budgets.

Equality – Better intelligence on individual properties improved planning for customers that require assistance or additional support.

4.0 Project Product Description (project components and success criteria)

Project Name	Modernise Finance System
Project Purpose	To baseline the current provision, articulate a future operating model incorporating route optimisation software, procure and implement a solution to release efficiencies, make financial savings and provide modern ways of working that support the Council to deliver services to meet changing needs and growth across the District.
Composition: What are the major components, resources or activities needed to complete the project	Analyse As-Is Design new operating model Procure solution Extract, cleanse and prepare system data Migration process Interfaces Quality control and end user testing
Skills Required	Route optimisation knowledge and skills Internal super-users Project management Technical evaluation GIS/Spatial data skills and knowledge System interfaces
Customer Expectations	<ol style="list-style-type: none"> 1. The system will be more automated and will streamline processes 2. The system will be user adaptable to show relevant information on a dashboard 3. The system will enable forecasting and monitoring to be performed eliminating the need for Microsoft Excel data manipulation 4. The new solution will enable quicker service adaptations 5. The system will offer a modern and easy to navigate profile to enhance the user experience. 6. The solution will have and utilise the most up to date address data. 7. Routes will be more efficient
Acceptance Criteria	<ol style="list-style-type: none"> 1. Head of Service and senior officers will spend less time manually manipulating routes. 2. Reports and dashboards will be available and adaptable. 3. Models will be developed through use of key datasets to project future impact on rounds. 4. Change will be understood more quickly through desktop analysis and operational changes planned.

	<p>5. Staff will be adequately trained with comprehensive process documentation to enable users to feel confident in the use of the tools.</p> <p>6. The solution will receive the daily updates from the LLPG</p> <p>7. There will be a reduction of fuel usage.</p>
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5.0 Project Approach

The project will use the corporate approach to change management as outlined by the Business Change team and report to the Transformation Steering Group periodically to provide highlight reports against the project plan.

5.1 Environmental considerations:

The Council’s Environmental Protection Officer has been consulted and will provide information on the expected reduction in the Carbon Budget through this project, thus contributing to the Corporate Plan target of the Council achieving Carbon Neutrality by 2030.

5.2 Privacy impact:

The Council’s Data Protection Officer will request a copy of the supplier’s Privacy Notice and Data Security Credentials. An initial review has taken place and found no obvious causes for concern however a full Data Protection Impact Assessment will take place.

6.0 Project Management Team Structure

