Greenprint.

GREENPRINT

HOW TO GUIDE

ADEPT
Association of Directors of Environment, Economy, Planning & Transport

ADEPT LIVELABS2
Decarbonising Local Roads

west sussex county council

Amey

South Gloucestershire Council
Delivering climate & nature action

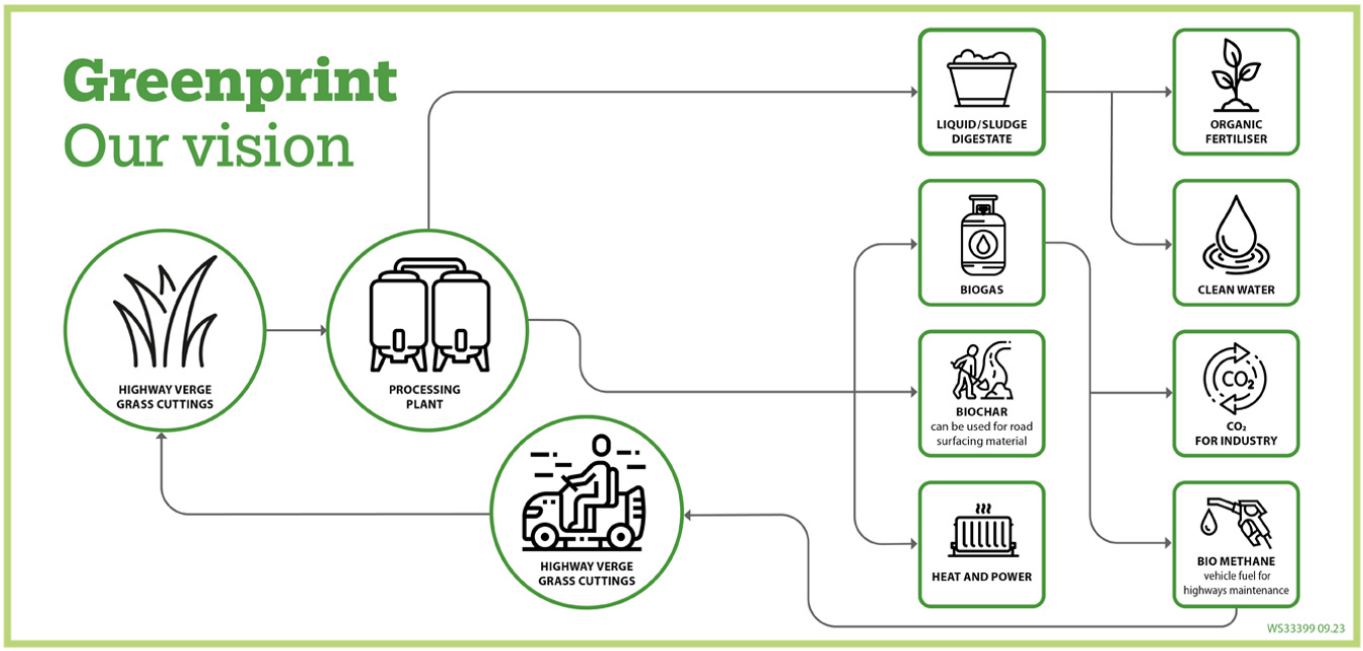
Contents

Introduction

The purpose of this document is to outline the process for setting up a new cut-and-collect verge management process and guide you through the required steps and questions. The guide has been broken down to follow the project lifecycle stages excluding the conclusion / closure of a project. Each stage in the guide will follow four workstreams:

- communications
- operations
- biomass processing and
- markets/revenue

This layout is designed to give direction in adopting a cut-and-collect strategy while also posing questions to encourage thinking around how this could be implemented in your local authority.



STAGE 1: Initiation

What are the authority's climate objectives and are they being achieved?

To evaluate whether climate objectives are being achieved, begin by clearly identifying what those objectives are—such as reducing carbon emissions, increasing renewable energy use, or improving climate resilience. Next, assess progress by reviewing performance data, reports or benchmarks that indicate whether targets are being met. Then, examine the current plans in place to support these goals, including policies, funding initiatives, partnerships, and community engagement strategies. This structured approach helps determine effectiveness and highlights areas for improvement or further investment. Reporting on climate objectives is likely something the authority already does and so speaking with the relevant team should be a priority.

How much value is placed on carbon reduction and biodiversity?

Begin by examining the climate objectives and identifying the specific weighting given to each area. This involves reviewing strategic documents, sustainability reports, or environmental policies to see how prominently carbon reduction and biodiversity feature in the overall climate strategy. Next, assess the plans currently in place to support these priorities—such as carbon offset programmes, renewable energy initiatives, habitat restoration projects, or biodiversity action plans. This analysis helps clarify the authority's commitment and highlights opportunities for strengthening environmental impact.

Have you baselined the carbon emissions of your service functions?

To baseline the carbon emissions of your service functions, start by identifying all relevant operational areas—such as transport, energy use, procurement, and waste management. Gather baseline data that reflects current emissions levels, using tools like carbon accounting software, energy audits, or emissions inventories. This data should be broken down by service function to allow for targeted analysis and future comparison. Establishing a clear baseline enables you to track progress over time, set realistic reduction targets, and inform strategic planning for carbon reduction initiatives. The ADEPT Carbon Leadership Programme is a fully funded programme available to all local highway authorities and is designed to help local highway authorities save money and increase efficiencies by measuring and identifying how to reduce carbon emissions: Carbon Leadership Programme | ADEPT

Is grass cutting contributing positively / negatively towards your climate goals?

To determine whether grass cutting contributes positively or negatively to your climate goals, begin by reviewing current data related to the practice—such as fuel usage, frequency, equipment type, and disposal methods. Analyse whether these activities align with or hinder carbon reduction and biodiversity targets. For example, frequent cutting may reduce carbon sequestration and harm habitats, while reduced or strategic mowing could support biodiversity. Evaluate the accuracy and completeness of the data to ensure reliable conclusions. This assessment helps inform whether changes to grass-cutting practices are needed to better support the council's climate objectives.

Is there potential to increase the contribution made by this function?

To explore whether grass cutting can contribute more effectively to climate goals, begin by analysing the existing data on cutting frequency, methods, fuel use, and ecological impact. Assess whether current practices support or hinder objectives like carbon reduction and biodiversity enhancement. Once the data is reviewed, identify areas for improvement—such as reducing mowing frequency, switching to electric equipment, or adopting wildlife-friendly cutting schedules. Evaluating these factors helps determine if there is potential to increase the function's positive environmental impact and align it more closely with the council's climate strategy.

Is there any funding to make any changes – from which budget would the funding be available?

Once the impact of grass cutting on the council's climate goals has been assessed, the next step is to identify potential funding sources to support changes. Begin by exploring internal budgets—such as environmental services, sustainability, or parks and green spaces—to see if existing funds can be reallocated. Then, investigate external funding opportunities, including government grants, climate action funds, biodiversity enhancement schemes, or partnerships with environmental organisations. Understanding both internal and external funding options ensures that any proposed changes are financially viable and aligned with broader climate objectives. Contact your neighbouring local authorities to discuss whether any joint working would reduce costs.

STAGE 2: Planning

COMMUNICATIONS

Stakeholder engagement – who needs to be consulted (eg. residents, parishes, local members)?

Effective stakeholder engagement is crucial to the success of any project, particularly when it involves changes or developments that impact local communities. It is essential to identify and consult with key stakeholders such as residents, parish councils, and local elected members to ensure their views are considered. Engaging these groups early in the process fosters transparency, builds trust, and can help mitigate potential concerns or opposition. By involving stakeholders in meaningful dialogue, project teams can gain valuable insights, improve decision-making, and enhance the overall outcomes of the initiative. Local wildlife or nature conservation groups may also be consulted where appropriate.

Engage with Council leadership

Engaging with Council leadership to ensure alignment with broader strategic priorities and to secure support at the highest level is crucial to any project. Early and consistent communication with both community stakeholders and Council leaders fosters transparency, builds trust, and enhances the likelihood of successful project delivery. Decision-making and governance issues will influence the ability to introduce cut-and-collect, which will require proper authority when it represents a change from business as usual.

Build engagement plans for local communities and internally within the council

It is essential to develop comprehensive engagement plans that address both external and internal stakeholders. Externally, this involves identifying and consulting with key community groups such as residents, parish councils, and local elected members, whose insights and concerns can significantly influence project outcomes. Internally engaging with Council leadership is vital to align the initiative with strategic priorities and secure executive support. Building broader structured engagement plans for local communities and within the Council helps foster transparency, encourage collaboration, and create a shared sense of ownership, ultimately driving more effective and inclusive decision-making. This should involve development of a Communications Strategy to ensure the right stakeholders are kept updated and informed.

Discuss timescales for the project

Clear communication of project timescales is also essential—this includes outlining the overall duration of the project, scheduling internal and external briefings, and planning any necessary events. Establishing these timelines early helps manage expectations, coordinate resources effectively, and maintain momentum throughout the project lifecycle. A project plan should be developed with the key milestone and gateways identified - in order that project progress can be defined and tracked.

Stakeholder mapping

A successful project begins with a clear stakeholder engagement strategy, underpinned by thorough stakeholder mapping to identify all relevant parties—both internal and external. Once stakeholders are mapped, tailored engagement plans should be developed to follow the course set in the Communications Strategy.

Produce comms schedule for internal and external briefings

A detailed communications schedule should be produced, outlining when and how updates will be shared with stakeholders throughout the project lifecycle. This structured approach helps maintain alignment, manage expectations, and foster trust across all levels of engagement.

OPERATIONS

What areas of grass is the authority currently responsible for managing?

How often are all these areas cut?

To identify which grass areas are currently managed by the responsible authority, begin by consulting local council or authority-maintained maps and asset registers, which often detail land ownership and maintenance responsibilities. Use GIS (Geographic Information Systems) tools if available, as these can visually highlight managed zones. Engage with grounds maintenance teams or contractors for on-the-ground insights, and review service level agreements or contracts that outline specific maintenance duties. Finally, conduct site visits or undertake surveys to verify the condition and upkeep of grass areas, ensuring alignment with documented responsibilities.

Does the authority have the authority to make changes to how all these areas are managed?

Before implementing changes to the management of specific areas, it is essential to determine whether the authority has the legal and operational power to do so. Clarifying whether the council is solely responsible for the area in question is a key step, as shared responsibilities or external oversight could limit its autonomy. Additionally, any existing contracts with suppliers must be reviewed to identify clauses that may restrict alterations to the current programme. These factors collectively influence the feasibility and scope of proposed changes.

Produce gap analysis

To conduct a comprehensive gap analysis, it is essential to first assess the current state of operations, identifying how existing processes function and where inefficiencies or limitations may lie. Following this, proposed changes to operations should be clearly outlined, detailing improvements or new systems required to meet strategic goals. The root cause of any gaps should be identified. A thorough cost estimation must accompany any proposed changes to ensure financial feasibility, alongside a realistic timeline that outlines how long implementation will take. A structured approach enables informed decision-making and supports effective planning for operational transformation.

What biodiversity monitoring is in place on green spaces or highway verges?

To evaluate biodiversity monitoring on green spaces and highway verges, it is important to first identify what systems are currently in place. This includes determining whether any data collection is actively occurring and reviewing existing reports that document ecological conditions or species presence. If current monitoring efforts are limited or outdated, new reporting frameworks and data collection processes may need to be developed to ensure accurate and ongoing assessment of biodiversity. Establishing a robust monitoring strategy will support environmental stewardship and inform future land management decisions.

What are the carbon emissions associated with each type of existing operation?

To understand the carbon emissions associated with existing operations, a detailed assessment must be carried out across all activity types. This includes compiling a comprehensive list of functions and activities and calculating the emissions of each. Transportation-related emissions should also be evaluated, considering vehicle types, fuel usage, and travel frequency. Additionally, other operational activities—such as energy consumption in facilities or maintenance processes—should be reviewed to identify any further sources of CO_2 emissions.

This analysis will provide a clear baseline for identifying reduction opportunities and informing sustainability strategies.

Does the authority have any existing equipment / machinery capable of cut-and-collect?

An audit of all existing assets should be undertaken. This involves cataloguing current machinery and assessing its technical suitability for cut-and-collect tasks, including functionality, efficiency, and environmental impact. Engaging with operational teams is also essential to gain practical insights into equipment usage, limitations, and potential for adaptation. This collaborative approach ensures that any decisions made are grounded in both technical data and frontline experience.

If verge management is carried out by an external contractor, does the contract limit the scope for making changes?

If verge management is currently outsourced to an external contractor, assess whether the existing contract allows for operational changes, such as transitioning to a cut-and-collect approach. This begins with a thorough review of the contract terms, focusing on clauses related to change of control and scope adjustments. Engaging in discussions with the supplier will help clarify the flexibility of the agreement and identify any potential barriers or opportunities for renegotiation. Understanding the contractual framework is key to determining the feasibility of implementing more sustainable verge management practices.

What is the cost of both types of operation and how do they compare?

To assess the financial implications of different verge management approaches, a comparison between the current operational costs and those of a cut-and-collect programme is necessary. This involves reviewing the existing expenditure on standard verge maintenance, including labour, equipment, and disposal methods. In parallel, the potential costs of implementing a cut-and-collect system—covering machinery, logistics, and waste processing—should be evaluated. By comparing both sets of figures, stakeholders can make informed decisions about the cost-effectiveness and long-term value of transitioning to a more sustainable management method.

How will the frequency of cutting change?

Understanding how the frequency of cutting will change is key when considering a shift from cut-and-drop to cut-and-collect operations. Currently, the average cutting frequency under the cut-and-drop method tends to be higher due to rapid regrowth and the need to maintain visual standards. In contrast, cut-and-collect can reduce the frequency over time by removing nutrient-rich clippings, which slows vegetation growth. To quantify this change, it's important to compare existing cutting schedules with projected frequencies under a cut-and-collect regime and estimate how long it will take for the reduced growth rate to become evident. This analysis will help inform operational planning and resource allocation. Check if any data exists on how long it typically takes to perform a single cut of a given area – this can be the benchmark against which a change to cut-and-collect could be measured.

BIOMASS PROCESSING

Determine the type of biomass processor – eg. AD plant, pyrolysis plant

Biomass processing offers a sustainable solution for managing organic waste, with various technologies available such as anaerobic digestion (AD), gasification, and composting. When evaluating the feasibility of a biomass facility, it is essential to consider its proximity to the local authority to ensure logistical efficiency and cost-effectiveness. Ideally, the facility should be located within a reasonable radius to minimise transportation emissions and enhance operational practicality. Consideration should also be given to any legislative constraints to using a specific processing method. The following paragraphs in this section will help to develop an initial set of selection criteria for identifying the most suitable biomass

processing method. While this initial framework will support early decision making, further time and analysis will be required to build a comprehensive and robust criteria set. This will ensure that all technical, environmental, economic, and regulatory factors are fully captured and assessed.

What are the carbon emissions associated with each disposal route?

Each processing method varies significantly in terms of carbon output. Combustion typically results in high direct CO_2 emissions, while anaerobic digestion produces biogas with lower net emissions due to methane capture and energy recovery. Gasification, though more efficient, still emits carbon but can be optimised for cleaner energy production. Composting, while slower, generally has the lowest carbon footprint, especially when managed to minimise methane release. Analysis has shown that pyrolysis as an effective route for carbon sequestration, with the production of biochar demonstrating significant climate benefits. For every tonne of biochar produced, up to two tonnes of carbon can be sequestered. Consulting with a specialist carbon consultant was used in the Greenprint project to determine the carbon emissions associated with AD and pyrolysis.

Can waste be transported to an existing plant or will one need to be constructed?

Before proceeding with biomass processing plans, it is essential to determine whether an existing facility is available to handle the required operations or if one is already being used to handle other waste. It is crucial that all possibilities to utilise existing operations be explored before considering alternatives. If no processing facility currently exists inside or within a reasonable distance of the authority, consideration should be given to constructing a new processing plant. This decision will impact project timelines, costs, and logistical planning, and should be informed by a thorough assessment of local planning, infrastructure and regulatory requirements – before knowing whether a business case for the investment required might be realistic.

How many tonnes of green waste, woody biomass or food does the authority currently dispose of?

To effectively monitor waste management, existing reports should be reviewed to track current waste figures. These reports provide insights into the volume of waste being produced across various categories. By categorising the data, it becomes possible to quantify specific types of waste, such as green waste, woody biomass, and food waste, measured in tonnes. This categorisation enables more targeted analysis and supports informed decision-making for sustainability initiatives to determine if grass can be co-mingled with other biomass waste to be processed.

What level of carbon reduction is sought from the changes in biomass processing?

There must be confidence that the net overall carbon emissions resulting from the cut-and-collect process will be lower than cut-and-leave – a value should be placed on the potential carbon savings that are lower than current operations.

Which type(s) of disposal / processing plant(s) is (are) in the vicinity? And can we use the existing storage and transport network for the biomass?

Understanding the current volume and nature of feedstock (such as green waste, woody biomass and food waste) disposed of by the authority is essential to evaluating processing capacity and potential carbon savings. The desired level of carbon reduction should guide the selection of disposal routes and processing plants, with attention given to the types and proximity of available facilities. This analysis will inform strategic decisions around infrastructure investment and operational change.

MARKETS AND REVENUE

Produce cost-benefit analysis

Producing a cost-benefit analysis represents a systematic approach used to evaluate the strengths and weaknesses of alternatives by

comparing the expected costs and benefits associated with different options. It helps decision-makers determine whether a project, investment or policy is financially viable and worthwhile. The process involves identifying all relevant costs (such as initial investment, operational expenses and potential risks) and benefits (such as revenue, efficiency gains or social impact), quantifying them in monetary terms where possible, and then calculating the net benefit. A positive net benefit suggests that the benefits outweigh the costs, making the option desirable.

What is the existing cost of disposing of biomass materials?

Cost analysis on using council resource or contractor

To improve the efficiency and cost-effectiveness of waste disposal operations, it is essential to begin by reviewing the current contracts and teams responsible for managing this process. This review should assess the scope, performance and value delivered by existing arrangements. This evaluation should include the average cost of disposal, which must account not only for direct expenses but also for associated labour, transportation and time costs.

Determine what products are going to be produced from the biomass

Conduct market analysis on the size of market and price for products produced from biomass

To effectively utilise biomass, it is essential to first determine which products will be derived from it. Once identified, a comprehensive market analysis should be conducted to assess the commercial viability of these products for the authority. This includes estimating the size of the market for each product and analysing current market prices. Understanding these factors will help guide strategic decisions and ensure that biomass production aligns with market demand and profitability.

What revenues (if any) are associated with processing these materials?

What revenue will be received from selling waste?

Estimating the quantity of biomass product generated from each facility is crucial for forecasting output. By combining the projected weight of biomass products with their market value, it becomes possible to calculate the potential revenue from sales. This financial insight will support the strategic planning and investment decisions involved in considering biomass processing ventures.

How much capital investment would be required to construct a plant? (ROI calculations)

If a decision has been made to construct a biomass processing plant, several critical financial and strategic considerations must be addressed. Capital investment levels need to be determined to understand the upfront costs associated with building and operating the facility. Identifying potential funding sources—such as government grants, private investors, or corporate financing—is essential to support the development. Return on investment (ROI) reports should be generated to estimate how long it will take to recover the initial investment through revenue generated from biomass product sales. These reports will rely on accurate projections of product output, market value, and operational costs, including whether facilities will pay to receive waste.

How much capital investment would be required to procure new equipment?

If a decision has been made to procure new equipment for cut-and-collect operations, several key steps must follow. First, the required level of capital investment needs to be determined to ensure financial feasibility. Next, appropriate funding sources must be identified to support the purchase. Finally, the return on investment (ROI) reports should be used to assess how long it will take to recover the initial costs, helping to guide strategic planning and justify the expenditure.

STAGE 3: Launch

COMMUNICATIONS

Arrange briefing calls

Chair briefing calls

Facilitate discussion with the relevant stakeholders – keep the conversation focused, encouraging input from all attendees, and managing time efficiently. Conclude by summarising key points, assigning actions, and confirming follow-up steps.

Arrange meetings with delivery teams

To arrange meetings with delivery teams, start by identifying the key participants and confirming their availability. Clearly define the purpose of the meeting in the invite, including a brief agenda to help attendees prepare. Ensure the meeting platform is accessible to all participants and include any relevant documents or links in the invite.

Distribute communications material

To distribute information effectively, begin by identifying the target audience and selecting the appropriate channels—such as email, internal platforms, social media, or physical handouts. Coordinate with relevant teams to confirm timing and messaging alignment. After distribution, monitor engagement and gather feedback to assess effectiveness and inform future campaigns.

Maintain engagement with council leadership

To maintain strong engagement with council leadership, establish regular communication through scheduled updates, briefing sessions, and collaborative meetings. Ensure that interactions are purposeful, focusing on shared goals, progress updates, and strategic alignment.

Produce briefing documents for local communities

To produce effective briefing documents for local communities, begin by understanding the audience's needs, priorities, and preferred communication style. Gather relevant information about upcoming initiatives, services, or campaigns, and tailor the messaging to be clear, inclusive, and community focused. Use accessible language and visuals to enhance engagement. Structure the document with key messages, timelines, contact details, and calls to action.

Host Q&A sessions with the community

Start by selecting a suitable platform and time that accommodates your audience. Prepare by gathering key topics, anticipated questions, and relevant updates. Encourage open dialogue, respond to questions transparently, and note any follow-up actions. After the session, share a summary or recording and address any unanswered queries to maintain trust and engagement.

OPERATIONS

Ensure performance monitoring is happening

Establish clear metrics and reporting frameworks aligned with project or organisational goals. Confirm that delivery teams and stakeholders understand their responsibilities in tracking progress and outcomes. Set up regular review cycles, using dashboards or performance reports to assess key indicators. Encourage transparency and accountability by documenting findings and sharing insights across teams. Address gaps or issues promptly and use monitoring data to inform decision-making and continuous improvement efforts.

Ensure regular catch-up calls in place with delivery team to address issues and performance

To ensure regular catch-up calls are in place with the delivery team, establish a recurring schedule that aligns with project timelines and team availability. Document key discussion points and agreed actions and follow up to ensure accountability.

Ensure biodiversity monitoring is in place on green spaces or highway verges

Identify survey locations and ecological features that require regular observation. Collaborate with environmental specialists to define monitoring objectives and suitable methodologies, such as species counts, habitat assessments, or photographic records. Establish a consistent schedule and assign responsibilities for data collection and reporting. Track findings over time and ensure results are shared with relevant stakeholders to support environmental planning and conservation efforts.

Procure equipment suitable for cut-and-collect

Identify the characteristics of the potential cut sites, such as terrain type, vegetation density, and access limitations. Consult with delivery teams and environmental specialists to determine the most appropriate machinery—typically flail mowers or tractor-mounted collectors. Request equipment demonstrations where possible. Finalise procurement through approved channels, and schedule training or induction sessions for operators as required.

Confirm cut frequency plan has been understood by delivery team

To confirm the cut frequency plan is understood by the delivery team, begin by clearly communicating the schedule, expectations, and rationale behind the plan. Share written documentation and visual aids if available and walk through the plan during team meetings or briefing calls. Encourage questions to clarify any uncertainties and ensure alignment. Follow up with a summary email or checklist to reinforce understanding. Build in performance monitoring

and address any deviations promptly to maintain consistency and quality.

Ensure operating teams are adequately trained

Identify the specific skills and knowledge required for staff, including equipment handling, safety procedures, and environmental standards. Develop or source training materials that are clear, practical, and aligned with operational goals. Schedule regular training sessions, including refreshers and inductions for new staff, and ensure attendance is tracked. Encourage hands-on learning and provide opportunities for questions and feedback. Monitor performance post-training to assess effectiveness and address any gaps through follow-up support or additional instruction.

BIOMASS PROCESSING

Construct biomass processor

To construct a biomass processor, begin by defining the intended scale and purpose—whether for composting, mulching, or energy generation. Identify the necessary components such as shredders, conveyors, separators, and storage units. Consult with engineering teams or suppliers to source suitable materials and equipment that meet environmental and operational standards. Develop a construction plan that includes site preparation, safety protocols, and installation timelines. Ensure all mechanical and electrical systems are properly integrated and tested. Once built, conduct training for operators and establish maintenance routines to ensure long-term efficiency and compliance.

Ensure agreement is in place with biomass processing plant

Begin by identifying a suitable facility that meets environmental standards and operational needs. Initiate discussions to outline expectations, including material types, volumes, delivery schedules, and processing methods. Draft a formal agreement covering responsibilities, compliance requirements, costs, and reporting protocols. Collaborate with legal and procurement teams to review and finalise the contract. Once signed, maintain regular communication with the plant to monitor performance and address any operational issues promptly.

Agree the make-up and schedule for biomass transportation to the processing plant

Begin by identifying the types and volumes of biomass to be collected, ensuring they meet the agreed specifications. Collaborate with delivery teams and the plant to define a transport schedule that aligns with operational capacity and environmental considerations. Document the agreed frequency, routes, and logistics, including vehicle requirements and loading procedures. Formalise the arrangement through a service-level agreement or contract and establish a communication protocol to manage changes or disruptions effectively.

Transport grass to the biomass processor – with other feedstocks if required

Coordinate with the delivery team to confirm collection points, volumes, and timing. Assess the suitability of vehicles for transporting both grass and any additional feedstocks, ensuring they meet safety and environmental standards. Plan routes that optimise efficiency and minimise disruption, especially when operating near public areas or sensitive sites. Clearly label and separate feedstocks if required by the processing centre. Maintain communication with the biomass facility to confirm delivery schedules and ensure smooth intake upon arrival.

Ensure performance reports are in place

To ensure performance reports are in place, begin by defining the key metrics and reporting frequency required to track progress effectively. Collaborate with delivery teams and stakeholders to establish a standard reporting format that is clear, consistent, and aligned with project objectives. Set up automated tools or templates where possible to streamline data collection and analysis. Assign responsibilities

for compiling and reviewing reports, and ensure deadlines are met. Regularly review the reports to identify trends, address issues, and inform decision-making.

Carbon reporting

Begin by identifying the sources of emissions across operations, including fuel use, transport, equipment, and waste processing. Use recognised frameworks such as the Greenhouse Gas Protocol to categorise emissions into scopes (1, 2, and 3). Collect accurate data from delivery teams, suppliers, and monitoring systems, and input it into carbon accounting tools or spreadsheets. Ensure calculations follow standard methodologies and are reviewed for accuracy. Compile the findings into a clear report that highlights total emissions, trends, and opportunities for reduction. Share the report with stakeholders and use it to inform sustainability planning.

MARKETS AND REVENUE

Set up P&L report to track costs and revenue from cut-and-collect

To set up a Profit and Loss (P&L) report for tracking costs and revenue from cut-and-collect operations, begin by identifying all relevant income streams (e.g. biomass sales, service charges) and cost categories (e.g. labour, equipment, fuel, transport). Use a spreadsheet or financial software to create a structured template with monthly or quarterly reporting periods. Input actual figures regularly and compare them against forecasts to monitor performance. Include summary sections for gross profit, net profit, and key financial ratios. Review the report with stakeholders to support budgeting, decision-making, and continuous improvement.

Produce forecast report to measure revenue against costs

Begin by identifying all expected income sources and expenditure categories related to operations—such as labour, equipment, transport, and biomass sales. Use historical data and project plans to estimate future figures and input them into a structured financial model or spreadsheet. Include monthly or quarterly breakdowns to track trends over time. Compare forecasted revenue against projected costs to assess profitability and financial sustainability. Review the report regularly with stakeholders to support budgeting, strategic planning, and performance management.

Conduct market analysis on the size of market and price for products on a regular basis and create a 5-year market report to determine size of market and direction

To conduct regular market analysis on biomass products, begin by identifying key feedstocks such as grass, recycled wood, and energy crops. Monitor market demand and pricing trends using industry reports and data from organisations like Tolvik and the Wood Recyclers' Association. Track changes in policy, such as Renewable Obligation Certificates (ROCs), and emerging technologies like Bioenergy Carbon Capture and Storage (BECCS), which influence market dynamics. Use this data to forecast pricing, assess supply chain risks, and identify growth opportunities. Regularly update your analysis to reflect shifts in regulation, technology, and consumer demand.

Produce both Capex and Opex reports

To produce Capital Expenditure (Capex) and Operational Expenditure (Opex) reports, start by clearly distinguishing between one-time investment costs (Capex) and recurring operational costs (Opex). Capex typically includes equipment purchases, infrastructure development, and set-up costs, while Opex covers labour, maintenance, fuel, transport, and administrative expenses. Use a structured template or financial software to itemise each category, assign cost values, and track spending over time. Include forecasted and actual figures to monitor budget adherence. Review the reports regularly with stakeholders to support financial planning, investment decisions, and cost optimisation.

STAGE 4: Performance and Control

COMMUNICATIONS

Arrange meetings with stakeholders to review work

Use a shared calendar tool to contact your identified stakeholders and propose suitable dates and times, ensuring availability across teams. Clearly communicate the purpose of the meeting in the invite, including a brief agenda and any documents to be reviewed. Choose a platform that supports collaboration, such as Microsoft Teams or Zoom, and ensure access is confirmed. During the meeting, facilitate structured discussion, capture feedback, and agree on next steps. Follow up with a summary and action log to maintain momentum and accountability.

Produce reports on the project highlighting key details

Begin by identifying the core objectives, milestones, and performance indicators relevant to the project. Structure the report to include sections such as progress updates, achievements, challenges, financials, stakeholder feedback, and next steps. Use visuals like charts, tables, and timelines to enhance clarity and engagement. Ensure the information is accurate, concise, and tailored to the audience—whether internal teams, external partners, or senior leadership. Regularly update the report to reflect current status and use it as a tool for decision-making and accountability.

Interview members of the public about their view on the project

Define the purpose and scope of the engagement—whether to gather feedback, assess impact, or inform future planning. Develop a set of clear, unbiased questions that encourage open responses. Choose appropriate locations or platforms for conducting interviews, such as community events, public spaces, or online surveys. Ensure participants are informed about the purpose of the interview and that their responses will be treated confidentially. Record responses accurately and respectfully, and analyse the feedback to identify common themes, concerns, and suggestions. Use the insights to shape project decisions and improve community engagement.

Produce and share reports with other councils on the project

Summarise the project objectives, activities, outcomes, and lessons learned. Include key metrics, visuals, and community feedback to provide a well-rounded view of progress and impact. Format the report professionally, using accessible language and consistent branding. Share the report through appropriate channels such as email, council networks, or collaborative platforms like SharePoint or Teams. Consider presenting the findings in joint meetings or webinars to encourage dialogue and knowledge exchange.

Arrange lessons learned meetings

Choose a suitable date and time that accommodates stakeholders and book a meeting space or set up a virtual meeting link. Prepare an agenda that outlines the purpose of the session, including a review of objectives, successes, challenges, and areas for improvement. Share this agenda in advance to encourage thoughtful contributions. During the meeting, facilitate open and constructive discussion, ensuring all voices are heard. Document the insights and agreed actions, then circulate the summary to all participants and relevant teams to support continuous improvement.

Review communication processes and their effectiveness

Map out the known communication channels used, such as emails, meetings, instant messaging platforms, and reporting tools. Assess each method in terms of clarity, timeliness, accessibility, and relevance to its intended audience. Gather feedback from stakeholders through surveys, interviews, or informal discussions to understand their experiences and identify pain points. Analyse communication outcomes—such as missed deadlines, misunderstandings, or duplicated efforts—to pinpoint inefficiencies. Use this insight to recommend improvements, such as streamlining channels, enhancing message clarity, or introducing new tools. Document findings and share them with leadership to support informed decision-making.

OPERATIONS

Review performance reports

Reports should cover a specified time period and include key metrics such as productivity, quality, efficiency, and outcomes. Examine the data for trends, patterns, and anomalies, comparing actual performance against targets or benchmarks. Pay attention to both quantitative results and qualitative insights, such as feedback or commentary. Identify areas of strong performance as well as those needing improvement. Summarise your findings clearly, highlighting actionable insights and recommendations. Share the review with stakeholders to support informed decision-making and continuous improvement.

Discuss project performance with delivery teams

Review key performance indicators, milestones, and any recent reports or feedback. Focus on understanding the root causes of performance trends, identifying blockers, and exploring opportunities for improvement. Capture all key takeaways and agree on actionable next steps.

Review biodiversity and carbon reports

Examine the scope of each report, including the methodologies used for data collection and analysis. For biodiversity, assess species richness, habitat conditions, and any noted changes or threats. For carbon, review emissions data, carbon footprint calculations, and offsetting measures. Compare findings against regulatory standards, internal targets, or industry benchmarks. Identify trends, gaps, and areas for improvement, and consult with environmental specialists if needed. Summarise key insights and recommendations to inform sustainability strategies and compliance efforts.

Review suitability of equipment and determine if new equipment needs to be used

Begin by assessing the current equipment in use, considering factors such as functionality, reliability, efficiency, and alignment with operational requirements. Gather feedback from users to identify any recurring issues, limitations, or safety concerns. Compare performance against expected outcomes and industry standards. Evaluate whether the equipment supports productivity and quality goals or if it contributes to delays or inefficiencies. If gaps are identified, research alternative options, considering cost, compatibility, and long-term value. Document your findings and recommendations and present them to decision-makers to support informed investment in new equipment if necessary.

Review equipment maintenance records/ reports

Collect all relevant maintenance records and reports for the equipment in question, ensuring they cover a defined time frame. Examine the frequency and type of maintenance activities performed, including routine servicing, repairs, and any reported faults. Look for patterns such as recurring issues, downtime, or delays in scheduled maintenance. Assess whether the maintenance history aligns with manufacturer recommendations and operational needs.

Identify any gaps or risks that could impact performance, safety, or compliance. Summarise your findings and, if necessary, recommend adjustments to maintenance schedules or procedures to improve reliability and efficiency.

Determine if the number of cuts can be reduced

Review the biodiversity and performance reports to understand the ecological impact and operational outcomes of current cutting schedules. Assess biodiversity indicators such as species presence, habitat quality, and seasonal variations, alongside performance metrics like cost, efficiency, and resource use. Identify areas where reduced cutting could benefit local ecosystems without compromising service standards or safety. Engage with environmental specialists and delivery teams to validate findings and explore alternative maintenance approaches. If evidence supports a reduction, propose a revised cutting schedule, ensuring it aligns with sustainability goals and stakeholder expectations.

BIOMASS PROCESSING

Review performance reports

Begin by collecting all relevant performance reports, ensuring they cover the appropriate time frame and include key metrics aligned with project or operational goals. Examine the data for trends, variances, and patterns across areas such as productivity, quality, timeliness, and resource use. Compare actual performance against targets, benchmarks, or previous periods to identify strengths and areas for improvement. Consider both quantitative data and qualitative feedback to gain a comprehensive understanding. Highlight any recurring issues or notable achievements and summarise your findings with clear recommendations to support informed decision-making and continuous improvement.

Review carbon reports

Start by gathering the most recent carbon reports relevant to your project, site, or organisation. Review the scope of each report, including the sources of emissions measured—such as fuel use, energy consumption, transport, and materials. Examine the methodology used for calculating carbon output, ensuring it aligns with recognised standards like the Greenhouse Gas Protocol. Analyse the data to identify trends, high-emission activities, and progress against reduction targets. Look for opportunities to improve efficiency or implement mitigation strategies, such as renewable energy use or offsetting schemes. Summarise key findings and recommendations to inform sustainability planning and compliance reporting.

Review product quality reports

Collect all relevant product quality reports, ensuring they cover a defined time frame and product categories. Examine key metrics such as defect rates, customer complaints, compliance with specifications, and inspection results. Look for trends or recurring issues that may indicate systemic problems in production, materials, or processes. Compare performance against quality standards, targets, and previous reporting periods. Engage with relevant teams—such as production, quality assurance, and customer service—to validate findings and gather context. Summarise insights and recommend corrective actions or process improvements to enhance overall product quality and customer satisfaction.

Discuss operations with site team

Review recent operational data, performance reports, and any relevant site-specific issues. Focus on understanding day-to-day processes, identifying inefficiencies, and exploring opportunities for improvement. Encourage feedback on equipment, workflows, safety, and communication. Document key points and agreed actions and follow up to ensure accountability and progress on any improvements discussed.

Review transportation costs

Gather all relevant data on transportation expenses, including fuel usage, vehicle maintenance, driver wages, route efficiency, and third-party logistics fees. Break down costs by category and time period to identify trends and high-cost areas. Compare actual spending against budget forecasts and industry benchmarks to assess cost-effectiveness. Investigate any anomalies or spikes in expenditure and consult with operations or finance teams for context. Evaluate whether current transport methods and schedules are optimised for efficiency. Summarise findings and recommend actions such as route adjustments, vehicle upgrades, or supplier renegotiations to reduce costs and improve value.

Determine ability to scale up operations

Review current operational capacity, including workforce availability, equipment utilisation, infrastructure, and supply chain reliability. Analyse performance reports to assess efficiency, output levels, and any existing bottlenecks. Evaluate whether current systems and processes can handle increased demand without compromising quality or timelines. Consult with site teams and delivery leads to understand practical constraints and opportunities. Consider financial implications, resource requirements, and potential risks. If scalability appears feasible, outline a phased plan for expansion, including necessary investments and contingency measures to support sustainable growth.

Determine future investment levels

Begin by analysing current operational performance, financial reports, and strategic objectives to understand existing resource utilisation and growth potential. Review cost trends, return on investment (ROI), and areas requiring upgrades or expansion—such as equipment, staffing, or technology. Consult with relevant teams to identify upcoming needs and opportunities. Factor in external influences like market conditions, regulatory changes, and sustainability goals. Use this information to forecast future investment requirements, prioritising areas that offer the greatest impact or risk mitigation. Present your findings with clear recommendations to support informed budgeting and strategic planning.

MARKETS AND REVENUE

Produce forecast report to measure revenue against costs

Collect projected revenue and cost data for the desired time period. Organise the data into categories such as monthly or quarterly figures. Use analytical tools or spreadsheets to calculate profit margins and identify trends. Visualise the data using charts—such as line graphs or bar charts—to clearly show how revenue compares to costs over time. Highlight any periods of

surplus or deficit and use these insights to inform budgeting, investment decisions, and strategic planning.

Produce 5-year market report to determine size of market and direction and conduct competitor analysis

Gather historic data on market performance, including sales volumes, revenue trends, customer demographics, and industry benchmarks. Conduct a thorough competitor analysis by identifying key players, evaluating their market share, pricing strategies, product offerings, and recent innovations. Use tools like SWOT analysis or Porter's Five Forces to assess competitive positioning and potential threats. Analyse market trends over the five-year period to uncover growth patterns, seasonal shifts, and emerging opportunities. Apply forecasting models to estimate future market size and direction, factoring in external influences such as economic conditions, regulatory changes, and technological advancements. Present your findings with clear visuals and strategic insights to support informed decision-making.

If you have built your own facility, determine if other councils will sell / pay for biomass processing

Determine whether other local councils are willing to collaborate—either by selling biomass material to you or paying for processing services. Begin by identifying councils with existing waste management challenges or sustainability goals aligned with biomass solutions. Reach out to their environmental or waste services departments to present your facility's capabilities, including cost-effectiveness, environmental benefits, and processing capacity. Offer tailored proposals that highlight mutual benefits, such as reduced landfill use or carbon footprint. Finally, assess interest through meetings, pilot agreements, or formal tenders to establish long-term partnerships.

Review performance reports to determine any cost saving activities

To uncover potential cost-saving activities, start by reviewing your organisation's performance reports regularly. Focus on key metrics such as operational efficiency, resource utilisation, and budget variances. Look for trends or anomalies that suggest overspending or underperformance in specific areas. Compare current figures against historical data and industry benchmarks to highlight inefficiencies. Once identified, investigate the root causes and explore alternative processes, technologies, or suppliers that could reduce costs. Document findings and present actionable recommendations to relevant stakeholders for implementation and monitoring.

CONTINUOUS IMPROVEMENT

Review processes - understand where refinements or improvements are required.

To enhance operational efficiency, begin by systematically reviewing existing processes across your team or department. Map out each step to understand workflows, decision points, and resource usage. Engage with staff involved in the processes to gather insights on bottlenecks, redundancies, or pain points. Use performance data, feedback, and benchmarking to identify areas where refinements could lead to improved outcomes—such as faster turnaround times, reduced costs, or better service quality. Once opportunities are identified, prioritise them based on impact and feasibility, and develop an action plan to implement changes and monitor results.

Compare costs, carbon emissions and biodiversity changes with desired future state.

To evaluate progress toward sustainability goals, begin by collecting current data on costs, carbon emissions, and biodiversity impacts associated with your operations. Establish a clear definition of the desired future state—this could include specific targets for cost reduction, net-zero emissions, or improved biodiversity metrics. Use comparative analysis tools or dashboards to

assess the gap between current performance and future objectives. Identify which areas show the greatest deviation and investigate the underlying causes. This comparison will help prioritise actions, allocate resources effectively, and track improvements over time.

Review frequency of cuts alongside these changes and compare against the biomass yields

To optimise land management practices, begin by reviewing the current frequency of vegetation cuts across your sites. Compare this data with changes in biomass yield, carbon emissions, and biodiversity indicators. Assess whether more or fewer cuts align better with your desired future state—such as increased biomass recovery, reduced carbon output, or enhanced habitat quality. Use this comparison to identify patterns or trade-offs and adjust cutting schedules accordingly to balance operational efficiency with environmental outcomes. Document findings and monitor the impact of any changes over time.

Investigate processing outputs levels

To ensure your biomass facility is operating effectively, regularly monitor and review processing output levels. Track the volume of biomass processed over time and compare it against input quantities, energy usage, and expected yield targets. Analyse fluctuations to identify potential inefficiencies, equipment issues, or seasonal variations. Use this data to optimise throughput, improve resource allocation, and support strategic decisions such as adjusting cutting schedules or expanding capacity. Consistent review helps maintain performance standards and align outputs with environmental and financial goals.

Consider changes to cut frequency or scale of operations

Analyse current cutting schedules in relation to biomass yield, carbon emissions, and biodiversity impacts. Assess whether increasing or decreasing cut frequency could enhance sustainability or efficiency. Similarly, evaluate whether scaling operations up or down—such as expanding to new sites or consolidating existing ones—would better align with strategic goals. Use data-driven insights and stakeholder input to guide decisions and monitor the effects of any changes to ensure continuous improvement.

Produce service improvement/change plans

To drive continuous improvement, begin by identifying areas where performance, efficiency, or sustainability can be enhanced—using data from process reviews, output analysis, and stakeholder feedback. Define clear objectives for the change, such as cost reduction, increased biomass yield, or improved biodiversity outcomes. Develop a detailed plan outlining the proposed changes, required resources, timelines, and responsible parties. Engage relevant teams early to ensure buy-in and smooth implementation. Monitor progress against key performance indicators and adjust the plan as needed to ensure long-term success and alignment with strategic goals.

FURTHER INFORMATION

For more information and documentation on Greenprint, including the End of Project Report, please visit the ADEPT website at: **www.adeptnet.org.uk/live-labs-2/south-gloucestershire-council-and-west-sussex-county-council-greenprint**
or use the QR Code below:

Greenprint

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