



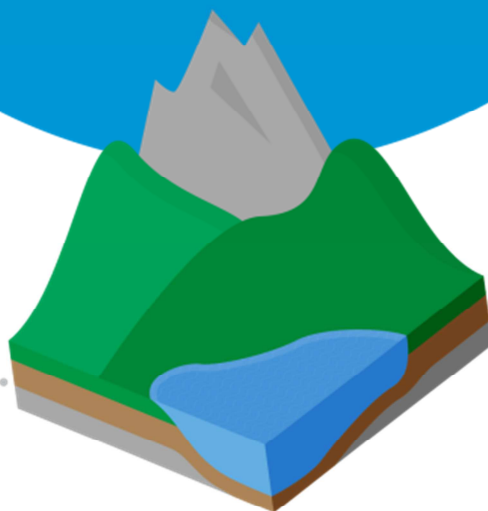
Scottish Environment Protection Agency

Charging Scheme Independent Review

April 2015



Scott-Moncrieff
business advisers and accountants



Scottish Environment Protection Agency

Charging Scheme Independent Review

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Executive Summary

The Scottish Environment Protection Agency (SEPA) is Scotland's environmental regulator. Its purpose is to protect and improve the environment, including the sustainable management of natural resources. It also contributes to improving the health and wellbeing of people in Scotland and to achieving sustainable economic growth.

SEPA currently operates twelve separate charging schemes that have evolved over the past ten years. In support of the new regulatory regime, specified by the Regulatory Reform Act 2014, the Scottish Government and SEPA have consulted widely over the past few years with the intention of consolidating five of the existing schemes into a single new risk based charging scheme that is transparent, fair, and consistent, as well as providing a financial incentive to improve environmental performance.

SEPA has prepared a new charging scheme upon which it intends to consult. Scott-Moncrieff was commissioned to undertake an independent review of this proposed charging scheme. The scope of the review was to consider:

- All relevant workload areas have been included to ensure the full recovery of regulatory costs.
- Assurance over the reasonableness of the methodology and costing of the workload planning information supporting each component of the new charging scheme.
- Validation of critical assumptions made by SEPA to allocate multiple purpose activities between the new charging scheme and other funding sources.
- A review of the methodology applied to allocate costs to licence holders.
- The completeness, appropriateness and availability for supporting information to validate key assumptions.

We reviewed the latest version of the charging scheme together with the consultation documentation as provided to us by SEPA on 9 March 2015. Our work did not constitute an audit and, except where specifically stated, we have not sought to establish the reliability of data sources by reference to independent evidence.

We have been impressed with the level of work undertaken in developing the new charging scheme and have concluded that, in broad terms, the new charges are in line with the principles intended. In particular, we were pleased to note that:

- The costs which the charges are intended to recover have been appropriately based on underlying financial records and allocation methods.
- The inclusion and exclusion of SEPA workload areas within the charging scheme is consistent with the approach outlined in the consultation documentation and with the principles of the Scottish Public Finance Manual (SPFM).
- The calculation of Activity Scores and Emissions Scores is highly complex but reflective of the stated principles of the charging scheme. The re-calculation of scores using different systems has provided additional reassurance over the integrity of the calculations.

- The calculation of annual charges is consistent with the stated methodology and allows for the full recovery of underlying costs.

Our detailed review comments include:

- While we have been satisfied with the documentary evidence supporting the calculation of the charges and related models, documentation in relation to the detailed design of the charging models themselves is incomplete. We understand this is to be considered during the consultation period and we would encourage SEPA to complete this task in the interests of transparency and to aid future maintenance of the charging scheme.
- The methodology used for calculating the application charges is not reflective of the current underlying costs but is intended to provide an incentive to deliver business efficiencies in this area. However, this approach is not consistent with that applied to annual charges and may give rise to an under-recovery of costs.
- The introduction of charges for pre-application advice in excess of prescribed levels needs to be considered carefully in relation to the need to charge VAT for such a service and potential implications for SEPA under state aid rules.
- We are aware of a number of initiatives being introduced by SEPA to improve the quality of data used to inform the charging scheme and we would encourage these proposals, particularly in relation to the improved alignment of time recording information to regulated activities.

We recommend the following actions to address the observations above:

- The detailed design of the charging models, including all adjustments and application of professional judgment, is fully documented to allow for maximum transparency and ease of maintenance.
- The approach to application charges is monitored closely and adjusted if it appears that any under recovery of costs is excessive.
- Detailed advice is sought in relation to the VAT and state aid implications of charging for pre-application advice.
- The planned changes to supporting data capture systems are implemented fully to improve the quality of data used and to increase transparency.

1 Introduction

1.1 Background

The Scottish Environment Protection Agency (SEPA) is Scotland's environmental regulator. Its purpose is to protect and improve the environment, including the sustainable management of natural resources. It also contributes to improving the health and wellbeing of people in Scotland and to achieving sustainable economic growth.

SEPA is a non-departmental public body, accountable through Scottish Ministers to the Scottish Parliament. It is funded through a combination Scottish Government Grant in Aid (GIA) and regulatory charges. In 2013/14 its total annual expenditure amounted to £80m of which £36m (45%) was recovered through charges.

SEPA currently operates twelve separate charging schemes that have evolved over the past ten years. In support of the new regulatory regime, specified by the Regulatory Reform Act 2014, the Scottish Government and SEPA have consulted widely over the past few years with the intention of consolidating five of the existing schemes into a single new risk based charging scheme that is transparent, fair, and consistent, as well as providing a financial incentive to improve environmental performance.

SEPA has prepared a consultation document that sets out this proposed new charging scheme.

1.2 Scope of the review

As per the terms of reference established by SEPA, this review has considered the following:

- All relevant workload areas have been included to ensure the full cost recovery of regulatory costs.
- Assurance over the reasonableness of the methodology and costing of the workload planning information supporting each component of the new charging scheme.
- Validation of critical assumptions made by SEPA to allocate multiple purpose activities between the new charging scheme and other funding sources.
- A review of the methodology applied to allocate costs to licence holders.
- The completeness, appropriateness and availability for supporting information to validate key assumptions.

We reviewed the draft set of consultation documentation provided to us by SEPA as at 9 March 2015, along with the charging scheme models and supporting evidence. We also met with key members of SEPA staff responsible for the development of each element of the charging scheme.

This report summarises the work undertaken in each of the above areas along with our recommendation for improvement.

1.3 Disclaimer

Our work did not constitute an audit and, except where specifically stated, we have not sought to establish the reliability of data sources by reference to independent evidence. The documentation we reviewed was confirmed as being current and the latest version at the time the review commenced (9 March 2015). We have not sought to verify the accuracy of any subsequent iterations of the consultation documentation.

This report has been prepared solely for SEPA for the purposes laid out in the scope and should not be quoted or referred to, in whole or in part, without our written consent. The terms of reference have been established by SEPA and we will not accept responsibility to any other party to whom the report may be shown or who may acquire a copy of this report.

2 Charging scheme

2.1 Background

SEPA has substantially completed development of the revised charging scheme. SEPA believes that the proposed new scheme delivers significant and wide ranging benefits. These include:

- Being simpler for operators to understand – combining five schemes into one.
- More cost reflective – charges better reflect SEPA's regulatory effort.
- Linking charges more closely to environmental risk.
- Encouraging better environmental performance.
- Providing SEPA more flexibility when introducing regulatory improvements.
- Better meeting national policy on charge setting.

SEPA and the Scottish Government will be seeking feedback through a consultation process with stakeholders.

2.2 Charging scheme approach

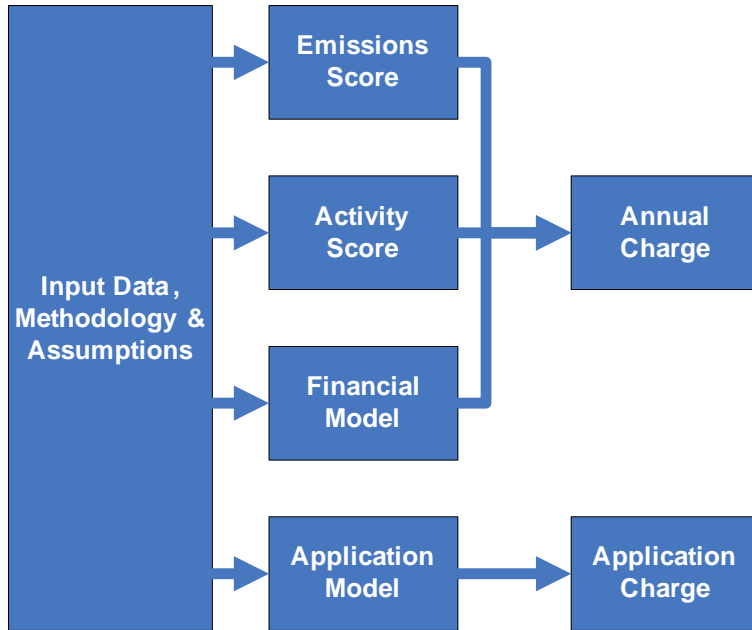
In line with the Scottish Public Finance Manual (SPFM), SEPA has aimed to reflect the following through the new charging scheme:

- Charges should recover the full cost of the service;
- Charges should not deliberately set out to recover more than the cost of the service;
- Charges should reasonably reflect the cost of the providing the service;
- There should be a clear and direct link between the charge payer and the benefits received;
and
- Cross-subsidies are not good practice.

2.3 Overview

SEPA has developed a number of models to apply these principles and calculate the charges. Each element has been developed by staff specialised in the particular area. A variety of technical solutions were used to develop, maintain and consolidate the component models of the charging scheme.

The relationship between each component element of the charging scheme is as follows:



The key component models of the charging scheme, and the modelling solution, are as follows

Component	Modelling application
Emissions Score	Spotfire
Activity Score	Microsoft Excel/ Spotfire
Financial Model	Prodacapo
Annual Charge	Spotfire
Application Model	Microsoft Excel

2.4 Charging scheme elements and methodologies

2.4.1 Annual charges

Annual charges recover the on-going costs that SEPA incur through delivery of its core regulatory duties of protecting and improving the environment. These charges apply each year and reflect activities SEPA conduct such as; site inspections; environmental monitoring and reporting.

SEPA aims to charge operators fairly and consistently, with the charges being reflective of the costs incurred. The proposed scheme is based on a charging model where the annual charge is calculated from three components, as follows:



The Activity Charge reflects regulatory costs directly attributable to the activities covered by individual licences. SEPA has categorised the activities that it regulates into approximately 350 types, including subdivisions by size. SEPA has calculated the overall level of regulatory resource required for each activity type and therefore the charge that should apply. The charge will increase in proportion to the complexity and environmental risk of a site.

The Emissions Charge reflects the indirect cost of environmental monitoring, data management and reporting. This covers emissions to air and water (abstractions and impoundments) as well as the treatment of waste. As these costs cannot be directly attributable to individual licences SEPA has sought to allocate the cost in proportion to the scale of the emission, abstraction or throughput of a site.

SEPA's environmental monitoring costs are predominantly driven by the activities of the larger sites. These sites are responsible for the bulk of the emissions in a sector. For larger sites, the charge will be allocated in direct proportion to the scale of the emission, abstraction or throughput of a site. This approach to charging delivers the 'polluter pays' principle and ensures that those who have the largest potential environmental footprint pay the highest charges. For smaller sites, the Emission Charge will be apportioned in relation to the magnitude of their Activity Charge.

The Emission Charge will be based on actual emissions averaged over the previous three year period (where such data exists). It will be recalculated every three years.

2.4.2 Compliance factor

A key aim of the new charging scheme is to incentivise better environmental performance. Consequently SEPA intend to reflect each operator's compliance assessment in the charges that they pay. The compliance factor is intended to result in operators with a poor compliance record paying more than those who consistently adhere to the terms of their licence.

SEPA propose that income generated via the compliance factor is used to directly fund compliance management activities. The total should reflect the additional cost incurred by SEPA in relation to working with operators that experience compliance issues. By directly funding compliance management costs from the income generated by the compliance factor, this should ultimately result in a reduction in the charges to operators that do not require compliance management input from SEPA.

However, the compliance factor will not initially be reflected in charges with the costs of compliance management being included within the Activity Charge. SEPA's Compliance Assessment Scheme is currently undergoing review to make it more consistent and proportionate. The future scheme will cover all operators and based on stakeholder feedback, will focus on the assessment of environmental harm and major technical non-compliances.

The compliance factor will only be reflected in charges from 2018/19 at the earliest. SEPA anticipates that a consultation on the proposed amendments to the compliance assessment scheme will be issued in due course.

2.4.3 Application charges

Application charges should recover the costs of processing an application for activities that require authorisation from SEPA (such as effluent discharges; abstractions, emissions to air and managing

waste). There are currently more than a hundred different application charges. SEPA proposes to consolidate these into sixteen charge bands ranging from £100 to £30,000. The application bands are intended to reflect the risk/complexity of the activity and thus the cost of determining an application.

In addition, SEPA has proposed a seventeenth band to cover the costs arising from management of the largest applications. These are typically complex multi-year projects (such as major infrastructure projects) that require a significant level of regulatory input from SEPA. Due to the significant variation in effort between such applications, and the low number of such projects, SEPA has considered it unfair and impractical to apportion this cost across an entire band. Consequently band seventeen applications will be charged on a time and expenses basis. To provide operators with greater certainty over the scale of the charge, SEPA has proposed that this charge be calculated in advance of submission of an application, based on an agreed project plan.

SEPA recognise that effective pre-application discussions are mutually beneficial and contribute to improving the quality of applications received. This significantly reduces the effort required by SEPA in determining whether or not to issue a permit. Consequently SEPA has incorporated an allowance for pre-application discussion – up to one hour for simple applications and up to fifteen hours for more complex ones. If an operator requires any further advice and support, this shall be agreed in advance and charged on a time and expenses basis.

3 Review findings

3.1 Overview

In the following sections we consider each component element of the new charging scheme in relation to the terms of reference of this review (see section 1.2). We have specified the review work undertaken, our observations (both positive and negative), as well as recommendations in terms of how SEPA's approach may be improved.

3.2 Financial data

3.2.1 Review work undertaken

The Financial Model was developed by members of the SEPA finance team using the 'Prodacapo' activity based costing application. We sought to confirm that the financial data used to populate the Financial Model was complete and accurate. To achieve this we:

- Met with members of the SEPA finance team responsible for the development of the Financial Model to discuss the methodology and development process.
- Reviewed supporting evidence to validate the data and assumptions used to populate the Financial Model developed within the Prodacapo modelling tool.
- Reconciled a raw extract of the actual 2013/14 results from SEPA's finance system to the values used to populate the Financial Model.

The financial data will be refreshed prior to establishing the definitive charges. Therefore we have assessed the approach used to populate the current working version of the Financial Model used to calculate the costs on which the annual charges are based to ensure the approach taken is valid and aligned to the principles of the Scottish Public Finance Manual (SPFM).

3.2.2 Observations

The data used to populate the Financial Model is based on SEPA's 2013/14 actual expenditure (£83.8m). We reconciled the financial data used to populate the model to an equivalent extract taken from SEPA's finance system at the time of our review. Following our reconciliation, an £1k variance remained. It is understood that this is due to a timing difference and some late transactions being posted to period 2013/14 following the extraction of information.

We noted that a number of adjustments have been made to the 2013/14 results. These were:

- All general ledger account and cost centre combinations containing less than £10 were disregarded. This was due to the volume of data creating performance issues within Prodacapo. Whilst the omitted transactions represent a significant volume of data (several thousand general ledger account/ cost centre combinations), it had an immaterial impact on the overall cost base to be allocated (less than £1k).
- Non-recurring expenditure, such as voluntary severance payments, were removed from the financial information. It is intended that these adjustments provide a financial position

representative of the likely on-going expenditure for use as a base position in the Financial Model.

Whilst all adjustments were reasonable and consistent with the principles of the new charging scheme, not all have been fully documented or explicitly justified. Whilst it is understood that there will be fewer adjustments required in future as charges will be based on SEPA's budget, there will nevertheless be some adjustments required. Fully documenting any adjustments made to financial data ensures consistency and transparency of the Financial Model.

The adjusted 2013/14 expenditure has been uplifted to reflect SEPA's forecast of total expenditure in financial year 2016/17; the year in which the new charging scheme is intended to be introduced. We reconciled the total expenditure within the Financial Model (£79.9m) to SEPA's 2016/17 forecast to within £100.

However, whilst this inflationary uplift enables the base position to be reconciled in totality to the forecast SEPA expenditure, it does not reflect potential changes in resource allocation between SEPA workload areas. SEPA is currently reviewing its business planning process and it is anticipated that the new model will be available to inform charges from April 2017.

3.2.3 Conclusion and recommendations

We were pleased to note that the methodology used to establish the financial data within the charging scheme is appropriate and aligned to the principles of the SPFM. However, addressing the following recommendations would further improve the robustness of the process:

- We recommend that all the documentation is improved to ensure that any adjustments made to financial data are clearly referenced and justification of these is fully documented.

3.3 Cost allocation

3.3.1 Review work undertaken

We sought to confirm that that methodology and assumptions used to allocate cost between SEPA's workload areas is appropriate. To achieve this we:

- Reviewed sources of input data to confirm appropriateness, completeness and accuracy.
- Reviewed the methodology used to apportion cost between a sample of SEPA's workload areas.

3.3.2 Observations

Expenditure is based on SEPA's 2013/14 actual results, uplifted to budgeted 2016/17 levels (see section 3.2). This has been allocated to SEPA charging scheme elements (activity, emissions and compliance) and environmental media (air, water, waste, land) on a variety of bases. This allocation process uses the following cost drivers:

- Activity Time Recording (ATR) data
- Staff headcount and full time equivalent (FTE) data

- Estimations, assumptions and professional judgment

As far as possible, cost has been allocated in proportion to the time analysis from SEPA's ATR system. A mapping exercise has been performed to match time categories used within ATR to the activities considered in the charging scheme. However, there is not a like-for-like relationship between all ATR codes and the activities considered in the Financial Model. In the absence of suitable ATR data or relevant FTE information, professional judgment has been applied. In most cases the finance team sought estimations from the teams in question with the basis of this information recorded and retained.

Members of the project team acknowledge that the current ATR data is not designed to support the new charging scheme and may not therefore be fully complete or accurate.. If material errors exist within this data, it has the potential to have an impact on the accuracy of the charging scheme.

We reviewed the cost allocation for a sample of costs centres and were successful in reconciling these to the extract from the ATR system (year 2013/14) used to populate the Financial Model.

We noted that the cost of the following SEPA workload areas has been apportioned based on headcount/FTE data:

- Area management costs have been allocated to teams on the basis of the number of FTE in each.
- The cost of Directors and Heads of Function is allocated to direct reports on an equal basis.
- The cost of corporate support functions (such as IT, HR, finance) have been allocated to all SEPA cost centres in direct proportion to the number of FTE in each.

We reviewed the FTE data used within the Financial Model. This was seen to be consistent with the source data as well as total headcount/ FTE figures reported in SEPA's 2013/14 Annual Report.

However, the use of FTE may not be reflective of the effort (and thus cost) of some activities. For example, certain SEPA teams may be more intensive users of IT services and teams with high staff turnover may be relatively larger consumers of human resource support. Such variations in the consumption of internal SEPA services will not currently be reflected in the allocation of cost, and consequently the charges.

Whilst Prodacapo calculates the allocation of costs across general ledger accounts, costs centres and workload areas, there is no single comprehensive documentation set that details or justifies the basis of each of these calculation steps at a detailed level.

3.3.3 Conclusion and recommendations

We consider the cost allocation methods used in determining the costs to be recovered through charges to be appropriate but could be improved as a result of planned changes in underlying data capture systems.

We recommend that the documentation covering the basis of cost allocation between general ledger accounts, costs centres and workload areas should be brought together to fully document and justify the allocation methods.

It is understood that planning is currently underway in relation to replacing the existing Activity Time Recording (ATR) system. It is intended that the recording of time should be aligned with the workload areas and categories considered within the new charging scheme. Key to this will be to establish coding structures which enable staff activity to be recorded at a level of detail sufficient for the purposes of the charging scheme, without becoming onerous for staff to complete.

3.4 Chargeable activities

3.4.1 Review work undertaken

We sought to confirm that only chargeable SEPA workload areas have been included within the charging scheme and that workload areas funded by Grant in Aid (GIA) have been excluded. To achieve this we:

- Reviewed supporting evidence to validate the chargeable/ non-chargeable nature of SEPA workload areas.
- Reviewed the Financial Model to confirm exclusion of non-chargeable SEPA workload areas within the total recovered via the new charging scheme.

3.4.2 Observations

The general principle SEPA has applied to determine whether costs are attributable to a charging scheme is that 'the costs of undertaking an activity are as a direct or indirect result of the existence of a relevant licence or permit or that a permit holder benefits from the activity'. Specifically:

- Operators pay for the work required by SEPA to regulate sites or activities.
- Operators pay a proportion of the costs of SEPA work that supports development of the methods, models and procedures that deliver SEPA's regulatory and environmental functions.
- Operators pay a proportion of overhead costs (such as IT, HR, administration, facilities and management costs) as well as depreciation costs.

There are a number of workload areas that are not subject to cost recovery. These are:

- Enforcement costs associated with legal action after referral to the Procurator Fiscal.
- Work on flooding (e.g. flood warning or flood risk assessment).
- River basin management planning.
- Environmental monitoring work associated with an activity regulated by General Binding Rules (GBR) or where impacts are a result of historic engineering works.

SEPA staff complete timesheets on the Activity Time Recording (ATR) system. The coding structure of ATR allows the majority of cost to be directly allocated to chargeable SEPA workload areas or to Grant in Aid (GIA) workload areas. However, there are a number of workload areas where ATR categories represent time spent on a mixture of chargeable and non-chargeable work.

We note that professional judgment has also been applied. Specifically, where staff undertake both chargeable and non-chargeable work, the effort may be recorded under a single analysis code in ATR. Consequently, this means that accurate apportionment of effort between chargeable and non-chargeable workload areas cannot be readily made. In such instances relevant SEPA teams have provided estimations, or have used other data sources (such as the Environmental Licencing Management System (ELMS)), to provide substantiated approximations of the relative apportionment of effort.

The output of the Financial Model has been extracted from Prodacapo. This is filtered to exclude the workload areas deemed to be outside the scope of the charging scheme.

3.4.3 Conclusion and recommendations

We reviewed the inclusion and exclusion of SEPA workload areas within the charging scheme and found this to be consistent with the approach outlined above, as well as with the principles of the Scottish Public Finance Manual (SPFM).

3.5 Emissions score

3.5.1 Review work undertaken

We sought to verify that the methodology used to calculate the Emissions Scores has been applied accurately and is consistent with the stated principles of the new charging scheme. To achieve this we:

- Met with the SEPA manager seconded to manage the development of the emissions charging scheme.
- Reviewed evidence to substantiate the accuracy/ appropriateness of the data/ assumptions used to calculate the Emissions Score.
- Performed a reconciliation of a sample of Emissions Scores using the stated methodology and extracts of source data provided to us.

3.5.2 Observations

The Emissions Score reflects the effort associated with SEPA's indirect workload areas, including environmental monitoring programmes, data analysis and reporting. As these workload areas cannot be directly attributable to any specific licence, the calculated Emissions Score will be used as a means of attributing the cost of SEPA's indirect workload areas to licences.

There are five environmental 'media' types to which emissions are considered. These are:

- Air
- Water discharge
- Water abstraction
- Water impoundment
- Waste

Within each media type, the individual pollutants monitored by SEPA have been identified and emissions 'factors' established. These are intended to reflect the relative toxicity/ environmental risk of the variety of pollutants considered within the charging scheme. The basis of the emissions factors are as follows:

- Air emissions are based on a variety of sources, although primarily factors used by the Environment Agency (EA) for their charging scheme. We reviewed a sample of SEPA emissions factors and found that the majority were consistent with the published EA factors.
- Water discharge emissions factors are also based on EA data. However, SEPA has been subdivided between receiving water types (inland, transitional, and coastal). This was conducted by the relevant SEPA science team. Whilst we were pleased to note that all emissions factors have been disclosed in the consultation documentation, the scientific basis of the subdivision between receiving water type has not been fully detailed.
- Waste has been classified as 'hazardous', 'non-hazardous' and 'inert'. These classifications are based on the European Waste Catalogue (EWC). We reviewed a sample of the SEPA waste classifications and found that they were consistent with the EWC. Currently SEPA has established a direct relationship between waste classification (hazardous, non-hazardous and inert) and the charging scheme classification (high, medium and low). However, we note that SEPA reserves the right to adjust this in future.

Whilst the initial development of the Emissions Model was conducted in Microsoft Excel, the methodology has now been built within SEPA's 'Spotfire' data analytics software. Using Spotfire addresses many of the inherent weaknesses of spreadsheets as well as enabling live data sources to be linked to the model. Calculations are performed in a controlled environment and when compared to spreadsheets, the output is presented in a manner that makes anomalies more evident and explorable.

The following data sets have been used as sources of the mass/ volume of pollutants released by licence:

- Actual pollutant release values submitted by licence holders as part of their annual returns and recorded by SEPA in the Scottish Pollutant Release Inventory (SPRI).
- Maximum pollutant release volumes specified by the licence and recorded by SEPA in the Corporate Licencing Administration System (CLAS).
- Actual pollutant emissions data based on records of sampling taken by SEPA.

We obtained extracts of these data sets and were able to validate that they have been used accurately within the Emissions Model. Furthermore, by using source data and applying the methodology described in the consultation documentation, we were able to successfully reconcile the Emissions Scores for a sample of licences. We were not able to perform a reconciliation of the waste scores as the emissions thresholds had yet to be finalised with Scottish Government at the time of our review.

Minimum thresholds have also been established for each pollutant. Where emissions relating to a licence are below the specified threshold, it will not incur an Emissions Score. See section 3.8 for information of how this is reflected in the emissions charge.

The Emissions Score for the licence is the sum of individual pollutant scores. The Emissions Score for each pollutant is calculated by taking the mass/volume released (three year average) divided by the pollutant factor. The square root of this calculation is the Emissions Score for each pollutant. Whilst this does dilute the 'polluter pays' principle, it is intended that this better reflects the environmental monitoring effort.

3.5.3 Conclusion and recommendations

The calculation of Emissions Scores is highly complex but we consider the approach adopted by SEPA as being appropriate for the calculation of relevant charges. Recreation of the Emissions Model using Spotfire has provided additional reassurance over the integrity of the calculations.

To further enhance the approach to calculation of the Emissions Score, we recommend that wherever pollutant factors deviate from existing or commonly accepted values, SEPA fully justifies and documents the selection, making the scientific basis of the changes explicit.

3.6 Activity score

3.6.1 Review work undertaken

We sought to verify that the methodology used to calculate Activity Scores has been applied accurately and is consistent with the stated principles of the new charging scheme. We sought evidence of the accuracy and appropriateness of the data and assumptions used to calculate the Activity Score. To achieve this we:

- Met with the SEPA Specialist seconded to development of the activity charging scheme.
- Reviewed evidence to substantiate the accuracy/ appropriateness of the data/ assumptions used to calculate the Activity Score.
- Performed a walkthrough of the calculation of an Activity Score.

3.6.2 Observations

The activity charge is intended to recover the cost incurred by SEPA from regulating the activities conducted by operators. The principles of the activity charge are as follows:

- Operators will pay the average cost of the direct regulation for their type of site. This includes inspections, collection and analysis of samples, collating and assessing data returns.
- Operators will pay the average costs of reactive regulation for their type of site. This includes responding to incidents and complaints, monitoring and assessing non routine events, supporting operators to achieve compliance, preliminary investigation into non-compliance. and operator liaison.
- Operators will pay the cost of regulatory support for their regime, relative to their direct regulation. This includes policy development, regime support, SEPA initiated reviews, sector management and support activities.

The total regulatory effort is quantified through the calculation of an Activity Score, reflective of the three components of the Activity Score: planned regulation; reactive regulation and regulatory

support. Planned regulation and reactive regulation are collectively known as ‘direct regulation’ and can be largely associated with individual licences. Regulatory support is less easily associated with individual licences as it is more targeted at a legislative regime level.

In common with the Emission Model, initial development of the Activity Model was conducted in Microsoft Excel by a SEPA Specialist. Whilst the majority of the methodology has now been built within SEPA’s ‘Spotfire’ data analytics software (realising the same benefits as described in section 3.5) there is a residual reliance on some calculations performed within the original Microsoft Excel model.

Data from a number of sources was utilised to inform the calculation of Activity Scores. These sources include:

- Corporate Licensing Administration System (CLAS)
- Dynamic Regulatory Effort Assessment Model (DREAM)
- Compliance Assessment Scheme (CAS)
- National Environmental Monitoring System (NEMS)
- Activity Time Recoding system (ATR)
- Environment Events Database (ELMS)
- Work Load Planning (WLP)
- Other miscellaneous sources (e.g. Scottish Water population equivalent data)

As static extracts of these data sources were taken at a point in time for the purposes of development, we were not able to reconcile these to current data from source systems.

We noted that in the development of the original model there were some elements of estimation and professional judgement used. Where possible these have been validated by relevant staff in SEPA, nevertheless there was some reliance on the professional judgment of the author of the model. A specific example is the mapping of activity types, where interpretation of the information (with an unavoidable degree of subjectivity in certain instances) was necessary to map existing activity categories to new activity categories. It is anticipated that the public consultation will contribute towards validation of any such assumptions.

Sector and regime uplift and discount factors have been established. These seek to apply a blanket adjustment to the Activity Scores for sectors and regimes to compensate for complexities that have not been able to be incorporated within the detail of Activity Score calculation. These factors have been established via analysis of time recording data in conjunction with environmental events data, workload planning information and some professional judgement.

Due to the complexity of the calculation of the Activity Score, we were not able to reconcile Activity Scores to the same extent as Emissions Scores or charges. We did perform a walkthrough of the calculation of the Activity Score for one licence, comprising of nearly 100 separate calculation steps.

3.6.3 Conclusion and recommendations

While we consider the methodology adopted by SEPA for the calculation of Activity Score to be appropriate we still have some concerns over the lack of adequate documentation and the use of complex Excel spreadsheets within the overall charges model.

The recreation of the Activity Model using Spotfire has provided reassurance over the integrity of score and charge calculation methodology. The score and charge calculation process (in spreadsheets and Spotfire) is dependent upon derived input data. It is important that this input data is robust, accurate and error free. Consequently, we recommend that a full forensic review of the derivation of the Spotfire input spreadsheets is conducted to ensure the integrity of all reference tables used in the Spotfire Annual Charges Model.

Creation of a detailed design document would contribute to ensuring the integrity of the Activity Model is maintained and enabling it to be interpreted by those not directly involved in the development process.

3.7 Compliance factor

3.7.1 Review work undertaken

As the compliance factor has not yet been incorporated within the charging scheme, we were not able to perform substantive testing on the calculation of compliance charges. Nevertheless, we did perform a high-level review of the intended principles of the compliance factor.

We discussed the development of the compliance factor with various members of SEPA staff involved in its development. We reviewed documentation that described the intentions in relation to the compliance charge.

3.7.2 Observations

SEPA's Compliance Assessment Scheme is currently undergoing review. It is the intention for this to be made consistent, proportionate and fair. The Compliance Assessment Scheme will cover all operators and will focus on the assessment of environmental harm and major technical non-compliances.

Once the Compliance Assessment Scheme has been finalised, it is intended that the published results of annual compliance assessments will be used to drive the computation of a 'compliance factor' within the charging scheme. Whilst full details of the compliance factor calculation have yet to be definitively established, the principle is that operators assessed to have 'poor' or 'very poor' compliance will incur additional charges. The additional revenue generated would be used to direct additional measures, designed to drive down poor compliance and ultimately reduce the overall cost associated with compliance management.

The cost of compliance management activities is calculated by the Financial Model (see section 3.3). However, until such time as the compliance factor is introduced, compliance management costs will be included within the activity charge.

The compliance factor will only be reflected in charges by 2018/19 at the earliest; subsequent to the first full review of the charging scheme. As the compliance factor has not yet been incorporated within

the charging scheme, we were not able to perform substantive testing on the calculation of compliance charges.

3.7.3 Conclusion and recommendations

Our review of the Compliance factor has been limited as this area of the new Charges regime is still under development.

However, a fundamental principle of the new charging scheme is for it to encourage better environmental performance. As discussed in sections 3.5 and 3.6, there have been some compromises made in relation to fully reflecting this principle through the activity charge and the emissions charge. Consequently, introduction of the compliance factor has the potential to enhance the capacity of the charging scheme to reflect the 'polluter pays' principle.

3.8 Calculation of annual charges

3.8.1 Review work undertaken

We sought to confirm the accuracy of the calculation of charges per licence and that they are reflective of the Emissions Score (see section 3.5) and the Activity Score (see section 3.6). To achieve this we:

- Met with the Senior Specialist Scientist responsible for the development of the Annual Charges Model which calculates the annual charge per licence.
- Reviewed relevant documentation and sources of supporting evidence.
- Reconciled the Emissions Scores and Activity Scores to the Annual Charges Model.

3.8.2 Observations

We noted that the methodology developed in the Emissions Model and the Activity Model is replicated in the Annual Charges Model. Whilst this approach does provide additional assurance in relation to the integrity of the calculations, it also generates the risk that changes made in emissions and activity models may not be fully or accurately reflected in the Annual Charges Model.

We were pleased to note that this risk has been recognised by SEPA and there are thorough control checks in place to ensure alignment of the Activity Model and the Annual Charges Model. However, equivalent control checks have not been developed to ensure the alignment of the Emissions Model with the Annual Charges Model.

We noted that at the time of the review there was a discrepancy between the Emissions Model and the Annual Charges Model. It was identified that this was due to recent developments to the Annual Charges Model in order to reflect seasonality of certain licences.

The activity charge is based on each licence's proportion of the total activity effort (see section 3.6). This proportion is used to allocate the cost associated with the total activity per environmental media. By applying this methodology we successfully reconciled Activity Scores to the charges calculated in the Annual Charges Model to within a variance no greater than +/-0.3% per licence. We also reconciled the costs associated with the chargeable workload areas to the Financial Model (see section 3.4).

The emissions charge is based on each licence's Emissions Score. Due to the wide range of emissions levels, there are a very small number of licences that are responsible for the vast majority of total emissions. Consequently, calculating an emissions charge adhering strictly to the 'polluter pays' principle would result in the majority of licences incurring negligible emissions charges, with the bulk of the cost being borne by a minority.

SEPA has proposed a compromise arrangement whereby if a licence does not incur an Emissions Score (emissions are below the minimum threshold – see section 3.5), but does incur a regulatory score, a 'base emissions charge' has been applied.

The costs associated with these 'base emissions' have been established as 10% of the total emissions costs per environmental media (see section 3.4). This has been allocated to each licence in proportion to its Activity Score. The remaining 90% of the total emissions costs are allocated in proportion to the Emissions Score of each licence. The intention is that this still reflects the 'polluter pays principle' (albeit to a lesser extent) and that those with the largest environmental impact incur the highest charges.

Within our extract, 1,926 licences incurred an air emissions charge. Of these, 1,701 (88%) incurred only the 'base emissions charge' with the remaining emissions costs being allocated between the remaining 225 licences in proportion to the Emissions Score of each.

By applying this methodology we successfully reconciled emission scores to the charges calculated in the Annual Charges Model to within negligible variances. We also reconciled the total emissions charges to the emissions costs calculated by the Financial Model (see section 3.4).

There are also a variety of caps and abatements of charges that will be continued from existing charging schemes. Within our sample were two hydropower licences generating less than 2MW. Per the stated abatements such licences will not incur an annual charge until 2018/19. We noted that the model has not calculated an Emissions Score for these licences.

3.8.3 Conclusion and recommendations

We were pleased to note that calculation of the annual charges is consistent with the stated methodology.

On the basis that development of the Activity Model and the Emissions Model is conducted in separate models, and the logic replicated in the Annual Charges Model assurance can be gained over the integrity of the calculations. Nevertheless, through maintaining separate models there is a risk that the changes made in emissions/ activity development models are not fully or accurately reflected in the Annual Charges Model.

While we noted that this risk has been recognised by SEPA and thorough control checks are in place to ensure alignment of the Activity Model and the Annual Charges Model, equivalent control checks have not been developed to ensure the alignment of the Emissions Model and the Annual Charges Model.

We recommend SEPA develop further control checks, specifically in relation to the Emissions Model. Control checks should seek to ensure that the Annual Charges Model completely and accurately reflects the methodology used to calculate Emissions Scores in the development model and that charges are accurately calculated. We recommend that consideration is given to developing a

'checklist' approach to validating the calculations prior to release of each future iteration of the full charging model.

3.9 Application charges

3.9.1 Review work undertaken

The application charging model was developed by the Charging Schemes Manager using a Microsoft Excel spreadsheet. We sought to confirm that the data used to populate the application charging model was complete, reasonable and accurate. We also sought to confirm that the principles outlined in the consultation documentation have been accurately reflected in the application charges model. To achieve this we:

- Met with the Charging Schemes Manager to discuss the methodology and development process.
- Reviewed supporting evidence to validate the data and assumptions used to populate the allocation charging model.

3.9.2 Observations

The high-level principles applied to calculate application charges are as follows:

- The average cost of processing an application for a permission type will be charged through the application fees. This will include the average cost of pre-application advice provided by SEPA.
- The average costs of reviews of permissions will be recovered from operators via application fees. These fees will include the average costs of preparing and issuing a revised permission.

The number of application charges has been significantly reduced, from approximately one hundred and sixty to sixteen primary charging bands. A seventeenth charging band has also been established for applications that require SEPA effort significantly in excess of the standard sixteen bands. It is intended that this approach will make it simpler and easier for applicants to follow, as well as making it more efficient for SEPA to administer.

A 'bottom up' approach has been taken to the development of the application charges model. We reviewed the Microsoft Excel model used to calculate the application charges. We noted that out of the approximately 350 activities that require operators to apply to SEPA for a licence, the application processing workflow for eleven of these has been assessed in detail.

Each step in the workflow has been identified, as well as the typical grade of staff member carrying out the task and the time (in minutes). These have been based, as far as possible, on Activity Time Recording (ATR) and Workload Planning (WLP) information. In the absence of appropriate data, professional judgement of the relevant teams has been sought. The time requirement has been multiplied by a charge rate for the grade of staff.

SEPA staff grades and banding have been used as a basis of staff charge rates. These have been uplifted to the levels projected for 2016/17 – the year in which the charging scheme is due to be introduced. The middle pay band for each staff grade has been used.

Charge rates are also inclusive of 'other' employment costs (superannuation and national insurance). Furthermore, estimations of additional costs (travel, subsistence, training etc.) have been added to the total, as well as an 85% uplift to recover overheads (facilities, IT, HR etc.). These assumptions are based on values that SEPA has historically used for costing purposes. It was demonstrated to us that the overhead uplift remains valid based on the 2014/15 budget.

We noted that the 2011/12 pay scale has been used as a basis for this calculation with uplifts applied to bring it up to expected 2016/17 levels. Whilst the pay scales used in the application model are not entirely consistent with the current pay scales, the variance is negligible. Pay information will be refreshed prior to establishment of the definitive charges.

The eleven application workflows were selected for being clearly distinct and characteristic of broad categories of application processes. These have been used as a basis for the development of fourteen 'standard' application workflows. The standard application workflows have been developed based on the expected effort required from different grades of staff to process different categories of application (as opposed to specific activities). This is informed by the eleven detailed workflows. We note that whilst fourteen standard application workflows have been developed, sixteen charging bands have been established. The version of the application charging model provided to us did not include detailed workflows for band three, band five or band ten charges.

All of the approx. three hundred activities have been associated with an application charging band. As detailed workflows have not been developed for all of these, an inevitable degree of professional judgment has been applied in relation to assigning the application charge band for each activity.

This 'bottom up' approach used to establish application charges is fundamentally different to the 'top down' the approach used to calculate the emissions and activity charges. For these, total costs have been divided by anticipated volume to reach an effective 'cost per unit' designed to recover full-costs. This inconsistency gives rise to a risk that application charges will not fully recover related costs and therefore will require cross subsidisation by either GIA or annual charges.

Band seventeen is reserved for 'unusually large or complex applications'. It is intended that the cost of processing such applications is charged to the applicant on a 'time and materials' basis. The ATR system being used to record time accrued and staff charge rates being the same as those used to calculate the cost of the standard sixteen application bands. SEPA intend to agree the cost of band seventeen applications up-front, based on an agreed project plan. Definitions of the principles that will guide identification of what constitutes 'unusually large or complex' are currently being developed, as are the business processes required to manage these.

We also note that a range of application surcharges and application discounts have been established. These are:

Description	Surcharge/ Discount
Substantial technical variation of application that requires re-advertising	30% of application charge
Charges for adverts	£500
Application for commercial confidentiality	£750
Substantial technical variation of an authorisation	75% of application charge
Surrender of an authorisation requiring substantial technical assessment	75% of application charge
Partial technical variation of an authorisation	30% of application charge
Partial surrender of an authorisation requiring technical assessment	30% of application charge
Transfer of an authorisation where a fit-and-proper person test is required	£1200
Administrative variation	No charge
Administrative surrender	No charge
Administrative transfer of authorisation	No charge
Environmental service application	No charge

Detailed workflows have not been developed that justify all of the specific discounts or surcharges. These are based on professional judgments or pre-existing rates.

3.9.3 Conclusion and recommendations

The methodology adopted for the calculation of Application Charges is not consistent with that adopted for the Annual Charges. The approach is intended to act as an incentive to improve efficiencies in this area. Whilst SEPA are not setting out to intentionally under-recover the cost of applications, we do recommend that the progress of efficiency initiatives are carefully monitored to ensure that intended savings are realised and any impact on overall cost allocation is correctly reflected.

Specifically, we recommend that workflows are developed for band three, band five and band ten charges. Furthermore, we recommend that all workflows are refined to reduce reliance on assumptions and professional judgement. SEPA should also look to develop detailed supporting information that robustly justifies the level of discount/surcharge applied in certain circumstances.

Planning is currently underway in relation to replacing the existing Activity Time Recording (ATR) system. It is intended that the recording of time should be aligned with the workload areas and categories consider within the new charging scheme. Key to this will be established coding structures that enable activity to be recorded at a level of detail sufficient for the purposes of the charging scheme, without becoming onerous for staff to complete. Also, where ATR data is going to be used for the purposes of billing applications, robust processes will need to be established to ensure that completeness and accuracy of the data.

We recommend that as better time recording data becomes available, efforts are on-going to refine the application charging model. In particular focus should be made in relation to minimising the reliance on estimations and judgement in favour of using more robust data sources.

We recommend that SEPA ensure that salary information used to define the charges is reflective of the average pay rates during the period up to the first review.

Significant effort needs to be made in terms of defining large and complex projects including clear criteria that can be used to identify band seventeen projects. Furthermore, clear protocols will also need to be established to ensure that any deviation from the agreed project plan is able to be quickly identified and any material increases in costs notified and agreed with the applicant.

Consideration will also need to be given to how any significant support in excess of the standard support provision can be identified on the basis that time recording is unlikely to be conducted at an applicant level for band one to band sixteen applications.

We recommend that SEPA seek advice in relation to the tax (specifically VAT) implications of provision of pre-application support services. Whilst it is not SEPA's intent to provide consultancy services, if this could be regarded as being provision of a commercial service there may nevertheless be a taxation implication for SEPA.

Furthermore, if pre-application support services are in competition with private sector consultancy providers there may be implications for state aid rules. SEPA therefore need to be able to robustly demonstrate that they are recovering full cost and that there is no subsidy from public funds (grant-in-aid).. SEPA are committed to achieving efficiencies in the processing of applications. If these efficiencies are fully realised then full cost recovery will be achieved. However, it is anticipated that these efficiencies will take time to be fully realised and GIA funding will be used to bridge any shortfall. In such a scenario SEPA could be exposed to challenge under state aid rules.

3.10 Implementation process

3.10.1 Review work undertaken

Although outside the direct scope of the review we also considered the steps that are needed to ensure that the new scheme can be implemented and maintained in the future. In particular we considered:

- Phased introduction of the new charging scheme;
- Documentation of the charge calculation process; and
- Changes in underlying data capture systems.

3.10.2 Observations

SEPA intends to phase the introduction of the new charges over the next five years from 2016-17. Within this five year period there is a planned review of the annual charges after two years. It is unclear from the consultation papers how any changes arising from this 2018-19 review will be incorporated within the phasing of the original changes.

While we understand the intentions behind the phasing of the changes arising from the new charges, greater clarity needs to be provided within the on how the review planned for 2018-19 will impact on this phasing process.

Whilst we are pleased to note that SEPA have comprehensively documented the high-level methodology, as commented in in many of the previous sections, we recommend that the design of the detailed models through which all charges have been calculated is fully documented. We also recommend that this detailed documentation is published. This enhances the transparency of the process and also ensures consistency over how the process is applied during future charge review cycles.

This published documentation process is similar to that undertaken within the Water industry where water companies need to comply with a set of documented guidelines on the treatment of a range of financial data submitted within regulatory accounts. These Regulatory Accounting Rules (Guidelines in England and Wales) are regularly reviewed and amended by regulators in consultation with water companies to ensure that the resulting reported results are consistent, and their calculation is transparent.

We understand there is a project underway to ensure that the SEPA billing systems are ready for the planned introduction of the new charges. It has also been recognised that improvements are needed in other data capture systems including the time recording system. At present the Activity Time Recording (ATR) system enables time to be captured against a series of activity codes. This data is then used as one of the drivers within the cost allocation model used to support the charges.

However the current system suffers from a number of weaknesses including:

- ATR simply records time and does not differentiate between the relative value of this time between different grades of staff.
- Some of the activities codes used within the ATR system are historic and need to be better aligned with the new charging scheme in order to provide more directly relevant data.

SEPA use the Agresso ERP system. This includes a Project module that is capable of providing the above functionality, including analysis of time across Projects, Work Orders and Activities. This time capture can then be used to reallocate time related costs within the General Ledger. This level of analysis can also be used within the Account Posting rules within the wider Agresso system thereby providing a more direct cost allocation approach reducing the need for complex cost reallocation models. SEPA are currently assessing how best to use this functionality.

3.10.3 Conclusion and recommendations

We have been impressed with the level of effort made to derive the new charges scheme. It is important that all of this work is documented in detail and published to support the principle of transparency and to ensure consistency in future charges reviews.

Similarly, the work involved in deriving this set of charges has highlighted the need to re-align underlying data capture systems to help improve the level of direct cost re-allocation that can be achieved and thereby reducing the need for complex modelling or use of professional judgement in determining charges.

To ensure clarity on the future impact of the new charging scheme further detail needs to be provided on how the review in 2018-19 will impact the phasing of changes in charges.

4 Conclusion and recommendations

4.1 Summary

We have been impressed with the level of work undertaken in developing the new charging scheme and have concluded that, in broad terms, the new charges are in line with the principles intended. In particular, we were pleased to note that:

- The costs which the charges are intended to recover have been appropriately based on underlying financial records and allocation methods.
- The inclusion and exclusion of SEPA workload areas within the charging scheme is consistent with the approach outlined in the consultation documentation and with the principles of the Scottish Public Finance Manual (SPFM).
- The calculation of Activity Scores and Emissions Scores is highly complex but reflective of the stated principles of the charging scheme. The re-calculation of scores using different systems has provided additional reassurance over the integrity of the calculations.
- The calculation of annual charges is consistent with the stated methodology and allows for the full recovery of underlying costs.

Our detailed review comments include:

- While we have been satisfied with the documentary evidence supporting the calculation of the charges and related models, documentation in relation to the detailed design of the charging models themselves is incomplete. We understand this is to be considered during the consultation period and we would encourage SEPA to complete this task in the interests of transparency and to aid future maintenance of the charging scheme.
- The methodology used for calculating the application charges is not reflective of the current underlying costs but is intended to provide an incentive to deliver business efficiencies in this area. However, this approach is not consistent with that applied to annual charges and may give rise to an under-recovery of costs.
- The introduction of charges for pre-application advice in excess of prescribed levels needs to be considered carefully in relation to the need to charge VAT for such a service and potential implications for SEPA under state aid rules.
- We are aware of a number of initiatives being introduced by SEPA to improve the quality of data used to inform the charging scheme and we would encourage these proposals, particularly in relation to the improved alignment of time recording information to regulated activities.

We recommend the following actions to address the observations above:

- The detailed design of the charging models, including all adjustments and application of professional judgment, is fully documented to allow for maximum transparency and ease of maintenance.

- The approach to application charges is monitored closely and adjusted if it appears that any under recovery of costs is excessive.
- Detailed advice is sought in relation to the VAT and state aid implications of charging for pre-application advice.
- The planned changes to supporting data capture systems are implemented fully to improve the quality of data used and to increase transparency.

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