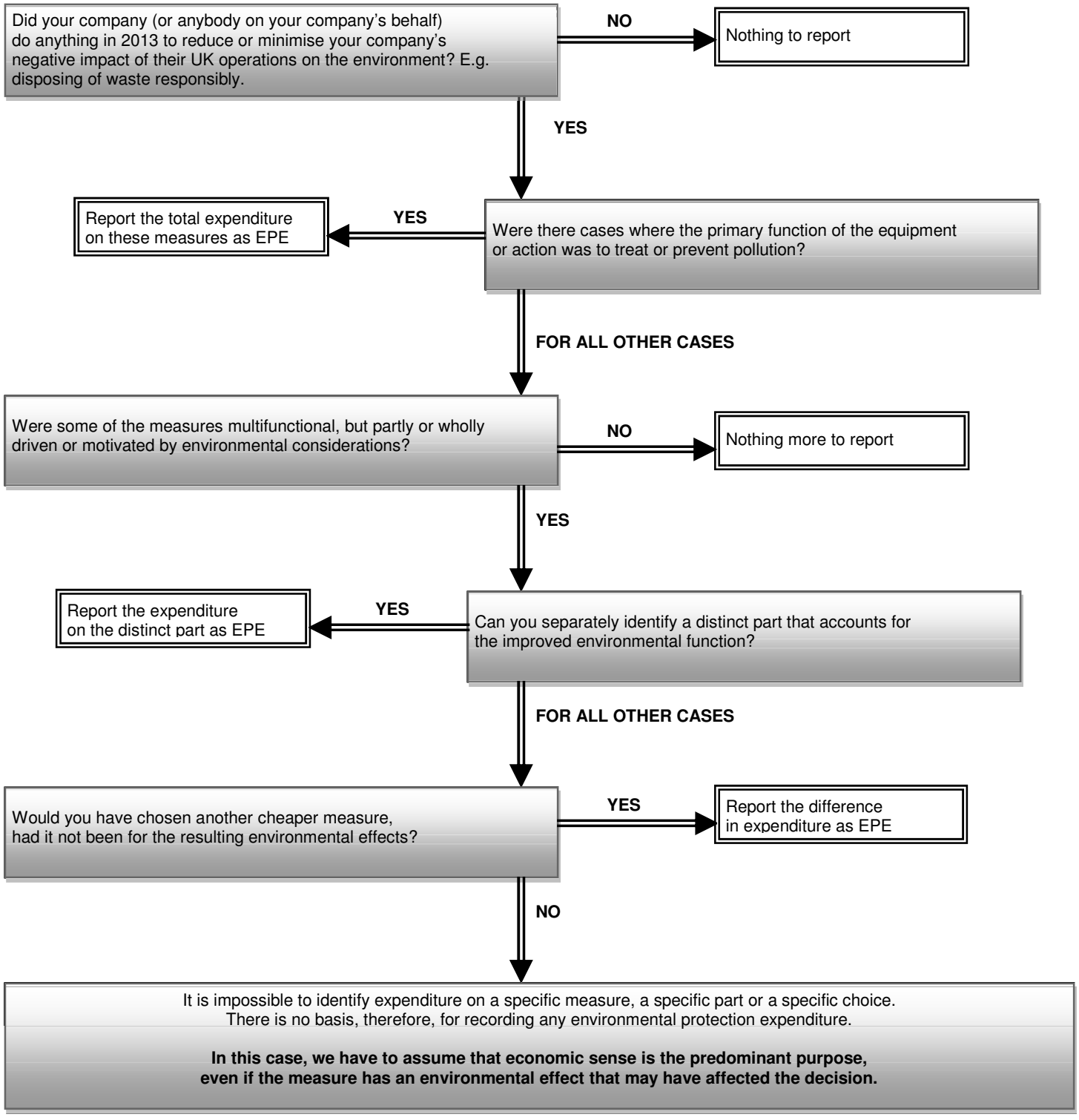
GUIDANCE NOTE FOR ENVIRONMENTAL PROTECTION EXPENDITURE BY INDUSTRY: 2013 – DEFRA SURVEY

Environmental protection is an action or activity (which involves the use of equipment, labour, manufacturing techniques and practices, information networks and products) where the main purpose is to collect, treat, reduce, prevent or eliminate pollutants and pollution or any other degradation of the environment resulting from the operating activity of the company.

It may include activities, which generate marketable by-products or result in savings (**section 3**). Environmental protection expenditure (EPE) can be divided into operating and capital expenditure (**sections 1 and 2**).

The aim is not to try to identify an environmental component in everything your business does, but rather to single out a few specific activities that are clearly guided by environmental considerations. When the main direct function or effect is normal production, and not environmental protection, only part (if any) of the expenditure should be included (extra cost, environmental share). This means that you include only measures that are clearly driven or motivated by environmental considerations, and exclude all other measures, regardless of their effect.

The decision tree below illustrates schematically how you could retrieve relevant information and estimate environmental protection expenditure:



Even responses from companies that have had little or no environmental expenditure are important for the quality of this survey's results. Therefore we gratefully accept partly filled questionnaires or questionnaires with no expenditure. If the expenditure is unknown or you are unable to estimate please enter n/k into the relevant box.

Thank you for your participation.

Front page: CONTACT DETAILS

Name (of the person completing the questionnaire)
Telephone number (including national dialling code)
Position in the company (e.g. Environmental Manager/Finance Director)
E-mail address

Front page: CLASSIFICATION DETAILS

Please specify which unit the information provided in the questionnaire was filled in for (i.e. a site, division, whole company or other).

The number of persons employed at the specified unit – employees are persons who work for an employer and who have a contract of employment and receive compensation in the form of wages, salaries, fees, gratuities, piecework pay or remuneration in kind. The relationship of employer to employee exists when there is an agreement, which may be formal or informal, between an enterprise and a person, normally entered into voluntarily by both parties, whereby the person works for the enterprise in return for remuneration in cash or in kind. A worker is considered to be a wage or salary earner of a particular unit if he or she receives a wage or salary from the unit regardless of where the work is done (in or outside the production unit). A worker from a temporary employment agency is considered to be an employee of the temporary employment agency and not of the unit (customer) in which they work. Employees include part-time workers, seasonal workers, persons on strike or on short-term leave, but excludes those persons on long-term leave. Employees do not include voluntary workers. Please complete this box for the unit (site, division, whole company or other) specified at the top of this section.

Unit Turnover in 2013 – the turnover of the unit (site, division, whole company or other) specified at the top of this section.

Total capital expenditure in 2013 - this is your total capital expenditure ("CAPEX") during 2013 for the unit specified, not just the environmental CAPEX.

1. UK OPERATING ENVIRONMENTAL PROTECTION EXPENDITURE

1.1a **Box A) In-house operating costs** include all expenditure for environmental protection except purchases of environmental protection services from external organisations. Only expenditure relating to **ENVIRONMENTAL PROTECTION ACTIVITIES** E.g. management of on-site waste water treatment, air pollution control equipment, should be included.

Labour
- Operating
- Supervisory
- Maintenance staff
- Staff training
- Monitoring

Energy cost
- Operation & maintenance cost
- Electricity
- Natural gas & other fuels

Operating & maintenance cost
- Emergency provision
- Insurance premiums
- Leasing payments (but not interest or depreciation)

Environmental management
- Reporting
- Monitoring
- Development plans
- Management Systems

Materials & service cost
- Replacement costs
- Chemicals, filters

1.1b **In-house operating cost media category percentages.**
2013 in-house operating expenditure (set out in **Box A**) needs to be split into percentage estimates for each category shown. These categories **must sum** to 100 percent. Use estimates where necessary.

1.2 **Operating costs paid to external organisations** for the treatment &/or disposal or investigation of the following.

Box B) Solid wastes (any waste, including general waste such as paper and cardboard, not classified as liquid waste):
Including active, inert, hazardous (special) & non-hazardous wastes, for example but not exclusively.
The first box (Box B) should include all solid waste (any hazardous or special waste included in the total should also be entered separately in the box below indented to the left).

- Absorbents
- Animal waste products
- Asbestos disposal (not removal)
- Bark and waste ash
- Coal and coke residues
- Contaminated earth, soil and items
- Drill cuttings and heads
- Dust and grit
- Earth metal oxides and carbonates
- End of Life equipment
- Fats and greases
- Particulate matter
- Plastics and rags
- Polymers
- Process Consumables
- Production residues
- Pressed sludge
- Resins
- Refractory bricks
- Sludge e.g. from tannery
- Soda equipment
- Soiled swabs

- Filter dust and pulp fibres
- Filter materials
- Fission products
- Fuel ash and carbon
- General waste (e.g. paper)
- Heavy metal precipitates and residues
- Incinerator ash and soot
- Inorganic solids
- Metal fuel cladding
- Metal, metalloids and metal salts
- Oily scale
- Organic acid salts
- Overburden (tailings)
- Packaging waste and scrap components
- Paint residues
- Paper, card and other office consumables
- Spent catalyst and molecular sieve
- Spray booth residues
- Sulphur, sulphates and sulphides
- Synthetic materials
- Tar and solid bitumen
- Transuranic elements
- Unused materials, natural, semi-synthetic and synthetic fibres
- Waste dyes
- Water treatment chemicals

Hazardous (special) waste includes for example:

- Leachable toxic waste
- PCB wastes
- Wastes containing dioxin

Box C) Wastewater: Waste, which may be directly discharged to sewer or watercourse (with or without treatment), for example but not exclusively**. It is expected that almost every company should have an entry for this section as this includes both domestic and industrial uses. If a zero is stated please specify why (for example septic tank or included in leasing costs).**

- Sewage treatment charges to Water PLC
- Discharge to sewer (Water PLC)
- Discharge to controlled waters

Box D) Liquid wastes
Contractors charges to remove & dispose of liquid waste, for example but not exclusively:

- Adhesives, bondants & glues
- Alpha and beta sources
- Aqueous scrubber liquors
- Aqueous waste containing chromium, magnesium & zinc
- Biocides
- Bonding & sizing agents
- Chlorinated & non-chlorinated solvents
- Coal tar
- Cutting & mineral oils
- Degreasers
- Detergents & disinfectants
- Effluents & their treatment chemicals
- Fabric treatment chemicals
- Fire retardant
- Halogenated solvents
- Hydrocarbon solvents
- Leaching solution
- Leather softeners
- Lignin degradation products
- Lubricants & mineral oils
- Metal solutions
- Methanol, ethanol, etc.
- Oil contaminated water discharge
- Oil releases & fuel oils
- Organic acids & alkalis
- Organic dyes
- Particulate matter contaminating water discharge
- Pesticides
- Printing inks, paints & dyes
- Process sludge
- Radioactive effluents & Cobalt 60
- Sludge contaminated with heavy metals
- Sulphate from hydrosulphite bleaching
- Uranium solution
- Wood preservative
- Waste acids & liquors
- Waste water
- Water treatment effluent & chemicals

Box E) Contaminated soil & groundwater: Investigation, removal, treatment, site inspection, or containment of contaminated land or groundwater, for example but not exclusively:

- Monitoring
- Dig & dump
- Pump & treat
- Containment systems

Box F) Regulatory charges
For example, but not exclusively:

- Environment Agency &/or Local Authority charges
- Trade Effluent Discharge Consents
- Waste Management licences
- Consignment Note charges

Box G) Other
For example, but not exclusively:

- Environmental consultants for consultancy services, if they do not clearly fall under categories A – F above) e.g. ISO 14001 (but not for R&D – see **section 1.4**)

Box H) Total external costs
Total external cost is the sum of boxes B to G (**this does not include the hazardous (special) waste box**).

1.3 **Total operating environmental cost** is the sum of boxes A and H, i.e. the sum of in-house operating cost and external operating cost.

1.4 **Environmental Research & Development**

Research and development comprises creative work undertaken on a systematic basis in order to increase the stock of knowledge and the use of this knowledge to devise new applications in the field of environmental protection.

2. CAPITAL ENVIRONMENTAL PROTECTION EXPENDITURE

2.1a **'End of pipe' Capital Expenditure** is defined as capital expenditure for methods, technologies, processes or equipment designed to collect, remove pollution and pollutants after their creation, prevent the spread of and measure pollution, and treat and dispose of pollutants generated by the operating activity of the company.

Including both equipment & installation expenditure (examples are given but the list is not comprehensive)

Pollution Control Equipment Expenditure, e.g.:	• Primary pollution control devices • Auxiliary Equipment • Instrumentation • Any associated freight equipment • Ancillaries - signage, consumables
Installation expenditure e.g.:	• Project definition, design & planning • Purchase of land • General site preparation • Engineering, construction & field expenses • Contractor selection cost & contractor fees

2.1b **'End of pipe' Capital Expenditure media category percentages.** 'End of pipe' capital expenditure (set out in **Box 2.1a**) needs to be split into percentage estimates for each category given. These categories **must sum** to **100** percent. Use estimates where necessary.

For example with relation to specific environmental areas, but not exclusively:

Wastewater	• Tanks & tankers for storage & transport • Waste water treatment plant • Filter presses • Lock out controls on tanks/pipes • Staged interceptors • Flow monitoring equipment
Air	• Caustic scrubber • Passive filters (activated carbon etc) • Fume hoods • Stacks, fans etc • Odour mask systems
Solid Waste	• Equipment for storage & transport of waste • Equipment for the treatment of waste • Waste compounds • Bunded areas
Soil / Groundwater	• Pumps controlling water table • Groundwater monitoring sites • Hard standing repair
Noise & Vibration	• Equipment for encasement & acoustic insulation of machines • Acoustic screening
Nature Protection	• Rehabilitation or redevelopment of damaged landscape • Conservation measures
Other	• Activities not classified above

2.1c **'End-of-pipe' key expenditure**

Please provide a brief description of the main 'end-of-pipe' capital expenditure (e.g. exhaust air scrubbing system). This would normally relate to the largest percentage entered in 2.1(b).

2.2a **'Integrated' Capital Expenditure,** which has a beneficial effect on the environment, relates to new/modified production facilities, which have been designed with environmental protection integrated into the process.

Integrated capital expenditure also includes capital expenditures for methods, processes and technologies and equipment that are integrated with the overall operating activity. Most new integrated processes are more efficient and contribute to reducing pollution and/or the use of raw materials in some way. Please state your total expenditure of such integrated processes that became operational in 2013.

Investment in this area may be particularly difficult to identify due to the highly specific nature of these projects, however some examples of the type of project, which would qualify as an example under this heading are given below (**section 2.2c**).

2.2b Element of **'Integrated' Capital Expenditure** that specifically relates to the additional cost of environmentally friendly processes.

The primary aim of some of the expenditure recorded in 2.2a may not be to reduce environmental pollution. Please identify the element that specifically relates to the additional cost of environmentally friendly processes. For example if a new process was installed in which the design takes account of environmental protection requirements, the environmental protection expenditure comprises the extra cost compared with a cheaper and less environmentally friendly alternative. It can also include the adaptation of an existing installation/process. The environmental expenditure is then the total purchase cost of the adaptation.

When the selected option is standard technology and there is no cheaper less environmentally beneficial alternative available to the company, the measure is by definition not an environmental protection activity, and no environmental protection expenditure should be reported.

2.2c	**Integrated capital expenditure media category percentages.** 2013 'Integrated' capital expenditure (set out in **Box 2.2b**) needs to be split into percentage estimates for each category given. These categories **must sum** to 100 percent. Use estimates where necessary.	For example with relation to specific environmental areas, but not exclusively:

Wastewater	• Equipment & plant linked to cleaner technology • Installations for reductions in water use & reuse of water
Air	• Equipment & plant linked to cleaner technology • Installations for reuse of waste gas to prevent air pollution • Installations for use of environmentally friendly raw material & auxiliary material
Solid Waste	• Equipment & plant linked to cleaner technology • Installation for reuse of materials in the production process • Plant producing products where waste has a value in-house or externally (but not if "core" company activity)
Soil / groundwater	• Equipment & plant linked to cleaner technology • Installations for triple walled tanks & overfill protection devices • Lock out devices on tanks & pipe work for security, which nonetheless protect the environment
Noise & Vibration	• Equipment & plant linked to cleaner technology • Equipment & machines designed or constructed for low noise or vibration level • Regrouping of installations to reduce noise & vibration pollution
Nature Protection	• Adaptation of plant or structures to provide habitat or wildlife protection
Other	• Activities not classified above.

2.2d	**Integrated key expenditure**	Please provide a brief description of the main integrated capital expenditure. This would normally relate to the largest percentage entered in 2.2(c).

3. COST SAVINGS & INCOME

3.1	**Annual cost savings as a result of expenditures or process changes taken in 2013 that have resulted in environmental improvements**	Including reduced material costs, energy savings (but **only** from environmental protection activities), labour savings, and savings from reduced regulatory charges. **Exclude** income from by products – see **section 3.2**. Please identify separately cost savings from: i) Improved use of or substitution of raw materials (£ and tonnes) ii) Reduction in water use or production of effluent (£ and cubic metres) iii) Reductions in energy use (£ and kWh) iv) Savings in waste disposal costs (£ and tonnes) v) Other.
3.2	**Annual level of income obtained from the sale of by-products**	Value of sales from recovered materials but only where these are additional to the company's core activity. For example energy generated from waste incineration (only the energy generated by the operating activity of the company) and recovered material generated from the company's waste management activities (e.g. collection and sale of metal scrap).

4. ENVIRONMENTAL MANAGEMENT SYSTEMS

4.1 Does your company have procedures to address environmental issues associated with your suppliers? Please consider all tiers of suppliers and whether the impact on the environment is taken into account when making business decisions. E.g. do you ask your suppliers to provide information on their environmental policy or management systems? Do you ask for information on environmental performance of products that you buy? Does this type of information affect your decisions?

4.2(a) Does your company operate any of the following environmental management systems? Please tick all that apply. If you have implemented another type of scheme, please specify details in the box below. Please consider whether your company operates an environment or sustainable management system when answering this question. Sustainability management is the management of environmental, social and economic issues in your company.

4.2 (b) If you have answered "None" to 4.1(a) above, please state the reason why an EMS has not been implemented.

4.3 (a) Do you apply any environmental foot printing methodologies to your products or organisation? E.g. ISO 14044, ISO 14064, ISO 14067, UK PAS 2050, GHG Protocol

4.3 (b) If 'yes', focusing on products, does your business apply more than one methodology to a single product?
Please think about any product marketed within the UK or exported. Are there different methodologies you apply to enable trading with different markets?

ADDITIONAL INFORMATION

- How long did it take you to complete the questionnaire in hours and minutes?
- Are there any extra comments you would like to make? This can include details of efforts your company has made to reduce its environmental impact.

NEED HELP?

For more information:

- Contact the Survey HELPDESK, which is run on Defra's behalf by URS:
  - By phone on 0800 169 5549 (Monday to Friday, 9am to 5pm), or
  - By e-mail at defra.survey@urs.com
- Alternatively, visit the survey website: https://www.gov.uk/government/organisations/department-for-environment-food-rural-affairs/series/environmental-protection-and-expenditure-epe-survey