

# BEST PRACTICE CHECKLIST PROCUREMENT



ADBA

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# Best Practice in Procurement

## What do we mean by procurement?

To build and run an AD plant, plant owners, operators and developers must purchase many individual items, which have to work together. These items may be critical components of the digestion process itself; be required for processing feedstock, digestate or gas; or they may be required for safety, staff welfare or environmental protection purposes. Items range from relatively cheap equipment such as gas monitors and safety vests, to major purchases for example a CHP engine. In most cases external services, such as ongoing maintenance for engines, must also be obtained.

All of these purchases, whether large or small, should have a sound procurement process behind them, and the effectiveness of this is a key factor in the success or failure of the project.

## Why is good practice in procurement important?

Following good procurement practice can contribute to effective risk management and safety standards, environmental protection and operational performance. It is important to make fully informed decisions when purchasing plant and equipment or services – to do otherwise risks incurring compliance and operational issues.

Good practice in procurement is about making appropriate and responsible choices. It is not about buying the cheapest option, but is about sourcing items and services that offer cost-effectiveness, that are good quality, effective and suitable for the specific plant and intended use. Purchasing a cheap, poor quality or unsuitable item is not cost-effective in the long term as it may have a shorter lifetime and could cause wider operational issues. Good practice rewards the operator because their plant is likely to perform better and experience less downtime.

## How will this list help you?

Procurement is relevant to both risk management and operational performance, but this dedicated checklist aims to increase awareness of good procurement practices and help decision-makers know what to look for. Key guidance documents, websites etc. are referred to throughout the document, and are listed in full at the end of the document.

This checklist is written primarily for those making procurement decisions and those contributing to the decision-making process, but it should be useful to all stakeholders in the AD industry.

The list is split into two sections and comprises recommendations from industry experts for improving procurement, which are:

### Procuring Plant and Equipment

- Be clear what you want to achieve
- Ensure that a clear specification has been provided to the potential suppliers
- Ensure the item is compliant with UK legal requirements and standards
- Ensure the supplier has a good reputation and track record
- Make sure the item will fit with items from other suppliers
- Ensure that the maintenance required for each item is feasible
- Find out if the supplier offers ongoing support
- Find out the expected lifetime of the item and any operational parameters beyond which it is at risk of failing to perform its function
- Understand how long it will take to replace critical items
- Have a back-up plan in case the supplier stops trading or stops making the critical part
- Does the insurance company have any preferred suppliers or requirements

### Procuring Services

- Ensure that a clear specification has been provided to the potential suppliers
- Ensure the supplier has a good reputation and track record, is financially sound and that their health and safety record is good
- Ensure that they have the necessary experience and qualifications
- Have a back-up plan in case the supplier stops trading
- Ensure that the supplier or contractor has adequate insurance coverage

# Procuring Plant, Machinery and Equipment

When obtaining plant and equipment, you should consider the questions below in order to work towards best practice. These recommendations may seem common sense, but it is important to ensure that they are consistently applied and awareness across the business is key to this. If purchasing decisions are made by a number of different people in the company, operators should consider producing guidelines on acceptance procedures and the checks and considerations that should be made by those staff responsible for buying it.

## Do you know what you want to achieve?

This will dictate the equipment and the services you require. If there is clarity from the beginning it saves complicated and potentially expensive changes being made part way through the process.

## Has a clear specification been provided to the supplier?

Without a clear specification, the supplier may be uncertain of the requirements and intended use of the item. This would make it less likely that the item supplied will be fit for purpose and more likely that there could be issues affecting the operation of the plant. For certain items, there may be options which are specific to certain feedstocks or circumstances – for example a de-packager may only be suitable for a specific type of packaging (e.g. plastic bags) and might be unsuitable for others (e.g. biodegradable bags). The developer/operator and the potential supplier should have a clear and shared understanding of the purpose of the item being sought and the wider characteristics of the process, feedstock and other items making up the plant.

## Does it meet UK legal requirements and standards?

For certain items of equipment, there are legal requirements and standards applied in the UK and Europe that must be complied with. Operators and developers should not assume that suppliers are aware of all relevant national legislation or minimum industry standards, especially if the supplier is not based in the UK; choosing items of plant, machinery and equipment that are compliant is the responsibility of the developer and operator, and failing to do so could result in legal repercussions. Some items may meet a European Standard but not British Standards, so it is important to understand the requirements and any differences.

### **What to look for**

As part of the procurement process, the operator/developer should list all legal requirements and standards that must be complied with – for peace of mind it is advisable to seek specialist legal advice or discuss with an insurer/broker or independent consultant to ensure that all relevant requirements are correctly identified.

Some key things to look for when purchasing equipment and machinery are:

**CE marking** – most new products on the European market should have CE marking when it is purchased. Note that partly completed material may not have CE marking. The CE marking shows that the manufacturer has complied with all relevant supply laws. CE marking does not guarantee that it is safe or suitable for use at a particular site – refer to the HSE's guide on buying new machinery and their advice on CE marking for more detail. Further information on purchasing work equipment can be found at the HSE's website.

**Declaration of Conformity** – most new products on the European market should be supplied to end users with a Declaration of Conformity, which is a certificate that declares that the product meets all relevant requirements of all product safety directives applicable to that product. It indicates that the product has been through the appropriate conformity assessment processes. See the HSE's advice on Declaration of Conformity. Partly completed machinery should have a Declaration of Incorporation.

**ATEX/DSEAR compliance** – DSEAR (Dangerous Substances and Explosive Atmospheres) Regulations (2002) incorporates the EU ATEX Directive (named from the EXplosive ATmospheres Directive). Whilst each supplier must ensure that relevant equipment supplied to conforms to the ATEX Directive and responsible suppliers will ensure that the equipment is designed to comply with DSEAR, it is the responsibility of the project manager to ensure that the entire installation conforms to DSEAR. It is important to confirm with the supplier that the item is suitable for the ATEX Zone where it is to be used and to ensure that a copy of the Certificate will be supplied with the item. See the Practical Guide to AD: Health and Safety Awareness and the HSE's guides to ATEX and DSEAR.

**Always obtain references for the supplier before purchasing: there have been instances where items have been falsely marketed as compliant with the above – to avoid this it is advisable to ask for references before making any purchases (see below).**

# Procuring Plant, Machinery and Equipment

## Does the supplier have a good reputation and proven track record?

It should almost always be possible for a supplier to provide potential customers with a reference – and it is recommended that the reference is verified by the operator by speaking to the referee directly. If possible, for major purchases it is recommended that operators/plant owners visit a site where the item is already in-situ and operational using the same or similar feedstocks, as this could prompt additional questions and considerations, and provide reassurance in the procurement decision. If the supplier is marketing a new product, it should still be possible to obtain references or see examples of similar products or work that they have undertaken.

The health and safety record of the supplier and the competency of their team involved in manufacturing, delivering and installing equipment should also be checked as part of this process. You can also access the Health & Safety Executive (HSE) public database; the registers contain enforcement information on relevant notices and prosecutions for Great Britain. Click here to access this. <http://bit.ly/28NBdLI>

A good source of information is other AD operators - there are various operator groups which provide a platform for discussion and experience sharing. Please visit ADBA's website and the Member Directory to explore the options available to you.

Finally, the financial standing of the potential supplier should be established, to help avoid making a purchase only to have the supplier ceasing trading.

## Will the item work effectively with items from other suppliers?

AD plants will normally be made up of items sourced from multiple suppliers and it is important that the various parts will fit together and work effectively. Developers, with the help of engineers and designers, should investigate whether the different parts are compatible before purchasing – specialist technical advice may be required to confirm this, unless the same set up is already in operation at an existing site.

## What maintenance plans will you need to put in place?

The operator will need to make sure that the maintenance needs of each item of plant and equipment are met, and make sure that any required maintenance is undertaken on time and in accordance with manufacturers' requirements and warranties. It is advisable to produce a Maintenance Plan or schedule so that the maintenance requirements are clearly set out and recorded. The supplier should provide advice on maintenance requirements as part of the purchase. Some maintenance may be undertaken by on-site operatives and some may be undertaken by specialist engineers or contractors.

## Does the supplier offer ongoing support?

When choosing a supplier, an operator should consider the level of support that is offered. It is considered good practice for the supplier or manufacturer to provide a helpline so you can get support and advice as and when you need it. Will the supplier provide guidance if the plant is performing poorly, if things go wrong or if the operator wishes to make changes to operations, for example? The purchaser should find out whether the supplier offers after sales support site visits, what the call out time is and whether availability guarantees can be provided. For foreign-based plant/service suppliers, it is important that you check whether helpline call handlers can speak in English (unless the buyer is bi-lingual) and that plant manuals are suitably translated.

## Find out the expected lifetime of the item and any operational parameters beyond which it is at risk of failing to perform its function

Each item will have an expected lifetime; knowing this can help the operator to plan ahead to purchase a replacement. In addition, it is important to be aware of the operational parameters within which this expected lifetime is realistic; if the item is pushed to function beyond these parameters then this is likely to impact its expected lifetime.

## Do you know how long it will take to replace critical items?

There will be items that are essential for the safe, compliant and effective running of an AD plant. If possible, having spares of these items on site at all times would be ideal, but this is not always feasible, so at the very least the operator should know where to obtain them from and how long it will take to be delivered. Where the need for replacements can be anticipated this will allow the operator to purchase these in advance to ensure that the site is not operating without these critical items.

# Procuring Plant, Machinery and Equipment

## Have you considered other options?

More than one potential supplier should be considered in the procurement process for key items of plant, machinery and equipment. This allows not only the comparison of price, but the comparison of quality, suitability and track record. By considering more than one option at the outset, it is possible to build up a list of suitable suppliers so that it is easy to find an alternative should the preferred contractor be unavailable or unable to deliver the item.

## Do you have a back-up plan in the event that the preferred supplier stops trading or supplying a critical item?

If a chosen supplier was to stop trading for any reason, operators need to ensure that they can still obtain required items – some items will be needed relatively quickly. It is therefore important to have contingency plans for each supplier; as part of the procurement process, which should involve considering more than one option, the operator could identify a preferred supplier but also a second-choice as a back-up. If the preferred supplier ceases trading, it may also affect maintenance plans or contracts, so operators should also consider suitable alternative maintenance arrangements for key items of plant and equipment.

## Does the insurance company have any preferred suppliers or requirements?

It is advisable to find out whether the insurance provider has any preferred suppliers or requirements, and to discuss any major purchases with them before making a procurement decision. Although choosing suppliers that are not on their list will not prohibit obtaining insurance, it may increase the cost of it. The insurer may also be able to provide advice on whether the supplier/item has any history of problems.

# Procuring Services

In this context, by 'services' we mean consultancy services (such as specialist engineers, planning and permitting consultants), maintenance contractors and technical competence cover. The key aspect that must be confirmed in the procurement process is that the supplier will provide individuals who are qualified, competent and have any permits to do the work needed to carry out the given service.

## Has a clear specification been provided to the supplier?

Without a clear specification, the supplier may be uncertain of the requirements and intended purpose of the service. This would make it less likely that the service provided will be suitable and more likely that there could be issues affecting the operation of the plant.

## Does the supplier have a good reputation and proven track record?

As with the purchase of machinery or equipment, it should normally be possible for a supplier of these services to provide potential customers with a reference and examples of similar work that they have previously completed. It is important to know whether they have a successful track record before making a decision.

Suppliers can be identified by looking at ADBA's Member Directory – inclusion in this is not an ADBA endorsement, but the fact that they are ADBA members means that they have access to up to date information on all industry matters.

A good source of information is other AD operators - there are various operator groups which provide a platform for discussion and experience sharing. Please visit ADBA's website to explore the options available to you.

## Does the supplier have the necessary 'permits to work', training and qualifications?

Some of the services that may be needed are shown below, with some details of what to look for to ensure compliance or quality.

### **Technical Competence Cover**

For sites that operate under an Environmental Permit or Waste Management Licence, ensuring that a Technically Competent Person attends the site in accordance with the requirements of an Environmental Permit is a legal requirement. The chosen person should have the relevant Certificate of Technical Competence (COTC), which is also known as a WAMITAB certificate – visit WAMITAB's website to see more information on the available qualifications. Contact CIWM (Chartered Institution of Wastes Management) or WAMITAB (Waste Management Industry Training and Advisory Board) for advice on this and always confirm requirements with the local Environment Agency officer.

### **Maintenance Contractors**

Effective maintenance is vital for the smooth operation of the plant, and inadequate or poor quality maintenance can result in increased risks to the health and safety of site staff and the maintenance contractors themselves. It may be necessary for contractors to enter confined spaces or work at height, both of which pose safety risks. It is essential that the contractors are suitably trained and qualified (see AD Competency and Skills Matrix, included at the end of this checklist), have the required permits to work, and are made aware of any site-specific risks or operational protocols before they begin work.

### **Planning Consultants**

If using an external planning consultant, they should have a Chartership from the Royal Town Planning Institute (RTPI). This indicates that the individual has a degree in planning and/or have a number of years of experience in spatial planning. Chartered Town Planners must also adhere to a code of conduct that specifies standards of professional ethics. Operators should ask prospective consultants to provide their CV with a number of examples of their work.

### **Environmental Permitting Consultants**

Permitting consultants may be members of the Chartered Institution of Wastes Management (CIWM) or Institute of Environmental Management and Assessment (IEMA). Both of these organisations are aimed at professionals in environmental management, with CIWM being the body focussed on the waste industry. Environmental Permitting consultants may also have a degree in Environmental Science or another relevant discipline. Operators should ask prospective consultants to provide their CV with a number of examples of their work relevant to environmental permitting and understand whether they have undertaken a similar project successfully before.

## Engineering and Design

Engineering and design companies should have a track record in the service they are supplying with some client references available. They should have qualified design engineers (members of the relevant professional institutions (e.g. ICE, IMechE, IET, IChemE, IGEM)).

The development of AD projects requires a wide range of technical disciplines to work in synergy the main ones being:

- Process/Chemical engineers will design the part of the plant that relates to the tanks, pipes, pumps and control instrumentation to move, heat, separate, mix the fluids involved in the process. They will prepare a mass and energy balance to determine how much goes into your plant, how much goes out, how much gas you produce and how does it translate into fuel.
- The civil contractor or engineer will be in charge for instance of building reception facilities, design and build the concrete bases for the tanks and other equipment, trenches for pipework and cables, structural calculations for gantries if needed, design your drainage and secondary containment.
- Electrical engineers are required in many different parts of the design, from the electrical wiring of the buildings and the installation of the instruments and control devices to the works related to power engineering both in low voltage and high voltage.

In addition one might require specialists on engines, odour, health and safety etc. It is very difficult to find individuals that can cover all these disciplines in detail. This is why it is so important to engage individuals with experience in developing projects and/or operating plants allowing the understanding of risks at each step in the process.

### Do you have a back-up plan in the event that the preferred supplier stops trading?

Some services are essential for the operation of an AD plant. For example, at a site with an Environmental Permit, there are minimum site attendance requirements for the Technically Competent Person, so if this service is provided by a third party and that supplier stopped trading the operator could be in breach of their permit if they do not find a replacement within the required timeframe. This illustrates the importance of having a back-up plan for all essential services.

### Ensure that the supplier or contractor has adequate insurance coverage

It is good practice to ensure that all those providing services have in place suitable insurance to cover the activities they are undertaking (for example, maintenance contractors). The supplier will need to provide Professional Indemnity insurance, as well as Public Liability and Employers' Liability insurance where appropriate.

## REFERENCES

- ADBA Best Practice Scheme: <http://adbioresources.org/our-work/best-practice-scheme>
- ADBA 'The Practical Guide to AD' (various chapters): <http://adbioresources.org/members-area/the-practical-guide-to-ad>
- ADBA Member Directory: <http://adbioresources.org/member-directory>
- ADBA website: <http://adbioresources.org>
- AD Competency and Skills Matrix: <http://adbioresources.org/library/working-group-documents>
- Chartered Institution of Wastes Management (CIWM) website: [www.ciwm.co.uk/](http://www.ciwm.co.uk/)
- HSE guide to Buying New Machinery: [www.hse.gov.uk/pubns/indg271.pdf](http://www.hse.gov.uk/pubns/indg271.pdf)
- HSE guide to ATEX: [www.hse.gov.uk/fireandexplosion/atex.htm](http://www.hse.gov.uk/fireandexplosion/atex.htm)
- HSE guide to CE Marking: [www.hse.gov.uk/work-equipment-machinery/ce-mark-summary.htm](http://www.hse.gov.uk/work-equipment-machinery/ce-mark-summary.htm)
- HSE guide to Declaration of Incorporation: [www.hse.gov.uk/work-equipment-machinery/declaration-incorporation.htm](http://www.hse.gov.uk/work-equipment-machinery/declaration-incorporation.htm)
- HSE guide to Declaration of Conformity: [www.hse.gov.uk/work-equipment-machinery/declaration-conformity.htm](http://www.hse.gov.uk/work-equipment-machinery/declaration-conformity.htm)
- HSE guide to DSEAR: [www.hse.gov.uk/fireandexplosion/dsear.htm](http://www.hse.gov.uk/fireandexplosion/dsear.htm)
- HSE guide to Purchasing Work Equipment: [www.hse.gov.uk/work-equipment-machinery/](http://www.hse.gov.uk/work-equipment-machinery/)
- HSE Register of Prosecutions and Notices: [www.hse.gov.uk/enforce/prosecutions.htm](http://www.hse.gov.uk/enforce/prosecutions.htm)
- Institute of Environmental Management and Assessment (IEMA) website: [www.iema.net/](http://www.iema.net/)
- Royal Town Planning Institute (RTPI) website: [www.rtpi.org.uk/](http://www.rtpi.org.uk/)
- WAMITAB's website: [www.wamitab.org.uk/pg/competence](http://www.wamitab.org.uk/pg/competence)

# Best Practice in Procurement

Table 1: AD competency and skills matrix

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The ADDBA competency skills matrix outlines the level of understanding a particular client must have in specific knowledge associated with Anaerobic Digestion (AD). The matrix identifies whether the skills are AD specific (AD) or Generic (G) skills also relevant to other industries. It also indicates whether a client (designer, constructor, manager etc) is required to have a General Awareness (GA), Detailed Awareness of Design or Management plus operating (D1), a Detailed Awareness of Operating (D2) or No Awareness (NR) of a particular skill. **The matrix should be considered a general guidance only, as specific plants may have different roles/ combined roles. For combined roles a higher level of competency than the individual roles is required.**

	AD Specific / Generic	CLIENT	DESIGNER	CONSTRUCTOR	COMMISSIONING / INSP TEAM	MANAGER (OPERATOR)	CORPORATE	SUPERVISOR	OPERATIVE	EXTERNAL MAINTENANCE	INTERNAL MAINTENANCE	Web-link / comments
DSEAR	AD	GA	D1	D1	D1	D1	GA	D2	D2	D2	D2	<a href="http://www.hse.gov.uk/fo/internalops/fod/oc/200-299/284-7.htm">http://www.hse.gov.uk/fo/internalops/fod/oc/200-299/284-7.htm</a>
Formal Hazard Review e.g HAZOP	G	GA	D1	NR	GA	D1	GA	GA	NR	NR	NR	<a href="http://en.wikipedia.org/wiki/Hazard_and_operability_study">http://en.wikipedia.org/wiki/Hazard_and_operability_study</a>
FUNCTIONAL SAFETY	G	GA	D1	GA	D1	D2	GA	GA	D2	D2	D2	
MATERIALS OF CONSTRUCTION	AD	GA	D1	GA	D1	D1	GA	D2	D2	D2	D2	
ABPR / HACCP	AD	GA	D2	GA	D1	D1	GA	D2	D2	D2	D2	
MANAGEMENT SYSTEMS	G	GA	NR	GA	GA	D1	D1	D2	D2	D2	D2	<a href="http://www.hse.gov.uk/pubns/priced/hgg65.pdf">http://www.hse.gov.uk/pubns/priced/hgg65.pdf</a>
PURWER	G	GA	D1	GA	D1	D1	GA	NR	NR	NR	NR	<a href="http://www.hse.gov.uk/pubns/priced/puwer.pdf">http://www.hse.gov.uk/pubns/priced/puwer.pdf</a>
CDM	G	D1	D1	D1	D1	GA	GA	NR	NR	D1	D1	
PRESSURE SYSTEM REGS	G	GA	D1	NR	D1	D2	GA	NR	NR	NR	NR	
NOISE	G	GA	GA	GA	GA	D2	GA	GA	GA	GA	GA	
CONFINED SPACE	AD	GA	D1	D1	D1	D1	GA	D2	D2	D2	D2	
WORKING AT HEIGHT	G	GA	D1	D1	D1	D1	GA	D2	D2	D2	D2	
VEHICLE / PEOPLE MOVEMENTS	G	GA	GA	D1	GA	D1	GA	D2	D2	D2	D2	
CONTROL OF CHANGE	G	GA	GA	GA	D2	D1	GA	D2	D2	D2	D2	
PERMITS TO WORK	G	GA	GA	GA	D1	D1	GA	D2	D2	D2	D2	
MANUAL HANDLING	G	GA	D1	GA	GA	D2	GA	D2	D2	D2	D2	
COSHH	AD	GA	GA	GA	GA	D2	GA	D2	GA	GA	GA	<a href="http://www.coshh-essentials.org.uk/">http://www.coshh-essentials.org.uk/</a>
PPE	G	GA	GA	D1	D1	D1	GA	D2	D2	D2	D2	

Notes

GA	General Awareness
D1	Detailed level - design or management plus operating
D2	Detailed level - operating
NR	Not required
AD	AD Specific
G	Generic skills

- For current purposes, the matrix splits skill areas into two categories: AD Specific / Generic. Initial view above but there is a range of requirements. Assumption is that Generic training / competency is suitable until AD specific becomes available with time. AD Specific - e.g. DSEAR. No AD Industry Code of Practice. Entec have provided training on Landfill gas based on ESA ICops. PROJEN already provide DSEAR/ATEX and Functional Safety training to the process, manufacturing and oil/gas industries. Developing both of these seen as a priority. Materials of construction and COSHH also specific.
- Process specific skills are required which cover a wide range of activities. These need to be identified on a project specific basis.