Notes to the consolidated financial statements for the year ended 31 December 2017

1. General information

Xaar plc ('the Group') is incorporated in England and Wales under the Companies Act 2006. The address of the registered office is given on the inside back cover. The nature of the Group's operations and its principal activity is set out in the Strategic Report starting on page 4.

2. Key sources of estimation uncertainty and critical accounting judgements

The key assumptions concerning the future and other sources of estimation uncertainty at the date of the statement of financial position that have a significant risk of causing a material adjustment to the carrying amounts of assets and liabilities within the next financial year are as follows:

Revenue recognition of the Seiko Instruments Inc. agreement (accounting judgement)

As per International Accounting Standard 18 revenue is recognised at the fair value of the consideration received or receivable. The Seiko Instruments Inc. (SII) agreement includes two separate licences one of which was provided to SII in December 2017 and the other to be provided to SII in 2018. Given the separate nature of these two licences and the timing of their provision, these have been unbundled and revenue recognised based on the fair value of their expected cash flows.

Impairment of goodwill (accounting judgement)

The Group determines whether goodwill is impaired at least on an annual basis. This requires an estimation of the 'value-in-use' of the cash-generating units to which the goodwill is allocated. Estimating a value-in-use amount requires management to make an estimate of the expected future cash flows from the cash-generating unit and also to choose a suitable discount rate in order to calculate the present value of those cash flows. Further details are given in note 13. The carrying amount of goodwill at 31 December 2017 was £5,212,000 (2016: £5,776,000).

Capitalisation of development costs (accounting judgement)

As described in note 3, the Group capitalises development expenditure as an intangible assets where the criteria under IAS 38 Intangible Assets is met. In 2017, total capitalised development expenditure amounted to £6,451,000 (2016: £10,223,000).

Useful economic life of capitalised Platform 4 Thin Film development costs (accounting judgement)

In August 2017, the Group completed the Platform 4 Thin Film project and commenced amortisation of the related capitalised development expenditure balance amounting to £31,514,000. The design of the Thin Film platform provides the Group with an architecture that can be used to create a generation of products that will access multiple markets. This technology platform will not only address markets which have already converted to digital inkjet printing but will also drive adoption in other markets. Given the size of the current, and potential, addressable market; current conversion rates of these markets; and the barriers to entry for potential competitors in terms of intellectual property and expense, the Group believes it has a technology platform that will provide significant value over the next 20 years. This expectation mirrors management's experience with the Group's original bulk technology which has experienced a 20-year useful economic life. Therefore management, based on past experience and future expectations, has determined that the useful economic life of the Platform 4 asset should be set at 20 years. The amount amortised in 2017 was £657,000 and the annual amortisation charge in future financial years will be £1,576,000.

3. Significant accounting policies

Basis of accounting

The financial statements have been prepared in accordance with International Financial Reporting Standards (IFRS), as adopted for use in the European Union. Therefore the Group financial statements have been prepared in accordance with Article 4 of the EU IAS regulation.

The financial information has been prepared on the basis of all applicable IFRS, including all International Accounting Standards (IAS), Standing Interpretations Committee (SIC) interpretations and International Financial Reporting Interpretations Committee (IFRIC) interpretations issued by the International Accounting Standards Board (IASB) that are applicable to the financial period, as adopted by the European Union.

The financial statements have been prepared on the historical cost basis, except for the revaluation of financial instruments. The Group financial statements are presented in Sterling and all values are rounded to the nearest thousand pounds (£'000) except when otherwise indicated.

The principal accounting policies adopted are set out below.

Basis of consolidation

The consolidated financial statements incorporate the financial statements of the Company and entities controlled by the Company ('its subsidiaries') made up to 31 December each year. Control is achieved where the Company has the power to govern the financial and operating policies of an investee entity so as to obtain benefits from its activities.

The results of subsidiaries acquired or disposed of during the year are included in the consolidated income statement from the effective date of acquisition or up to the effective date of disposal, as appropriate. Where necessary, adjustments are made to the financial statements of subsidiaries to bring the accounting policies used in line with those used by the Group.

All intra-group transactions, balances, income and expenses are eliminated on consolidation. Foreign exchange gains and losses arising on the retranslation of trading balances with subsidiaries with different functional currencies are reported in the income statement.

3. Significant accounting policies continued

Going concern

The Group's business activities, together with the factors likely to affect its future development, performance and position, are set out in the Strategic Report. Notes 19, 20 and 23 include a description of the Group's objectives; policies and processes for managing its capital; its financial risk management objectives; details of its financial instruments and hedging activities; and its exposure to credit risk and liquidity risk.

After making enquiries, the Directors have a reasonable expectation that the Group has adequate resources to continue in operational existence for the foreseeable future, based on the Group's forecasts and projections for the next 12 months, taking account of reasonably possible changes in trading performance. For this reason, we continue to adopt the going concern basis in preparing the financial statements.

Adjusted financial measures

Adjusted financial measures comprise adjusted profit before tax, adjusted profit before tax excluding the impact of IAS 38 and adjusted diluted earnings per share. These measures are alternative performance measures (APMs) which are not defined or specified under the requirements of IFRS. These APMs adjust for recurring and non-recurring items which management consider to have a distorting effect on the underlying results of the Group. Items adjusted include share-based payment charges, exchange differences on intra-group transactions, restructuring and acquisition costs and the research and development expenditure credit. Recurring items are adjusted each year irrespective of materiality to ensure consistent treatment.

Business combinations

The acquisition of subsidiaries is accounted for using the acquisition method.

Goodwill arising on acquisition is recognised as an asset and initially measured at cost, being the excess of the cost of the business combination over the Group's interest in the net fair value of the identifiable assets, liabilities and contingent liabilities recognised. If, after reassessment, the Group's interest in the net fair value of the acquiree's identifiable assets, liabilities and contingent liabilities exceeds the cost of the business combination, the excess is recognised immediately in the income statement.

Goodwill

Goodwill arising on consolidation is initially recognised as an asset at cost and is subsequently measured at cost less any accumulated impairment losses. Goodwill which is recognised as an asset is reviewed for impairment at least annually. Any impairment is recognised immediately in the income statement and is not subsequently reversed.

For the purposes of impairment testing, goodwill is allocated to each of the Group's cash-generating units expected to benefit from the synergies of the combination. Cash-generating units to which goodwill has been allocated are tested for impairment annually, or more frequently when there is an indication that the unit may be impaired. If the recoverable amount of the cash-generating unit is less than the carrying amount of the unit, the impairment loss is allocated first to reduce the carrying amount of any goodwill allocated to the unit and then to the other assets of the unit pro rata on the basis of the carrying amount of each asset in the unit. An impairment loss recognised for goodwill is not reversed in a subsequent period.

On disposal of the cash-generating unit, the attributable amount of goodwill is included in the determination of the profit or loss on disposal.

Goodwill arising on acquisitions before the date of transition to IFRS has been retained at the previous UK GAAP amounts subject to being tested for impairment at that date. Goodwill written off to reserves under UK GAAP prior to 1998 has not been reinstated and is not included in determining any subsequent profit or loss on disposal.

Revenue recognition

Revenue is measured at the fair value of the consideration received or receivable and represents amounts receivable for goods and services provided in the normal course of business, net of discounts, VAT and other sales related taxes, but gross of any tax withheld.

Sales of goods are recognised when all of the following conditions are satisfied:

- The Group has transferred to the buyer the significant risks and rewards of ownership of the goods
- The Group retains neither a continuing managerial involvement to the degree normally associated with ownership, nor effective control over goods sold
- The amount of revenue can be measured reliably
- It is probable that the economic benefits associated with the transaction will flow to the entity
- The costs incurred, or to be incurred, in respect of the transaction can be measured reliably.

For sales of goods to a distributor with consignment stock arrangements, revenue is recognised at the point of sale by the distributor which is when the risks and rewards of ownership of inventory have transferred. For sales of goods to distributors with standard credit terms, revenue is recognised at point of shipment.

3. Significant accounting policies continued

Revenue recognition continued

Development fees gained from joint development agreements are treated as income over the periods necessary to match them with the related costs.

Funding received for internally generated intangible assets is recognised on a straight-line basis to match the amortisation period of the related intangible fixed asset.

Royalties are recognised on an accruals basis in accordance with the actual revenue trend in the most recent quarterly statements received from each licensee.

Interest income is accrued on a time basis, by reference to the principal outstanding and at the effective interest rate applicable, which is the rate that discounts estimated future cash receipts through the expected life of the financial asset to that asset's net carrying amount.

Printheads are sold to certain customers with volume discounts. Revenue from these sales is recorded based on the contracted price less the estimated volume discount based on the anticipated volume of sales.

Leases

Rentals payable under operating leases are charged to income on a straight-line basis over the term of the relevant lease, except where another more systematic basis is more representative of the time pattern in which the economic benefits from the lease asset are consumed. Contingent rentals arising under operating leases are recognised as an expense in the period in which they are incurred.

In the event that lease incentives are received to enter into operating leases, such incentives are recognised as a liability. The aggregate benefit of incentives is recognised as a reduction of rental expense on a straight-line basis, except where another systematic basis is more representative of the time pattern in which economic benefits from the leased asset are consumed.

Foreign currencies

The individual financial statements of each Group company are presented in the currency of the primary economic environment in which it operates (its functional currency). For the purpose of the consolidated financial statements, the results and financial position of each Group company are expressed in Sterling, which is the functional currency of the Company and the presentation currency for the consolidated financial statements.

Exchange differences arising on the settlement of monetary assets and liabilities, and on the retranslation of monetary assets and liabilities, are included in the income statement for the period.

In order to hedge its exposure to certain foreign exchange risks, the Group may enter into forward contracts (see page 99 for details of the Group's accounting policies in respect of such derivative financial instruments).

For the purposes of presenting consolidated financial statements, the assets and liabilities of the Group's foreign operations are translated at the exchange rates prevailing on the date of the statement of financial position. Income and expense items are translated at the average exchange rates for the period.

Exchange differences arising are recognised in other comprehensive income and taken to the translation reserve. Exchange differences on the translation of net investments are taken to the translation reserve of the applicable entity.

Goodwill and fair value adjustments arising on the acquisition of a foreign entity are treated as assets and liabilities of the foreign entity and translated at the closing rate.

Government and EU grants

Government and EU grants are not recognised until there is reasonable assurance that the Group will comply with the conditions attached to them and that the grant will be received.

Government and EU grants relating to research and development are treated as income over the periods necessary to match them with the related costs.

Operating profit

Operating profit is stated after charging restructuring costs but before investment income and finance costs.

Retirement benefit costs

Payments to defined contribution retirement benefit schemes are charged as an expense as they fall due. Payments made to state managed retirement benefit schemes are dealt with as payments to defined contribution schemes where the Group's obligations under the schemes are equivalent to those arising in a defined contribution retirement benefit scheme.

Taxation

The tax expense represents the sum of the tax currently payable and deferred tax, including UK corporation tax and foreign tax.

3. Significant accounting policies continued

Taxation continued

The tax currently payable is based on taxable profit for the year. Taxable profit differs from net profit as reported in the income statement because it excludes items of income or expense that are taxable or deductible in other years and it further excludes items that are never taxable or deductible. The Group's liability for current tax is calculated using tax rates that have been enacted or substantively enacted by date of the statement of financial position.

Deferred tax is the tax expected to be payable or recoverable on differences between the carrying amounts of assets and liabilities in the financial statements and the corresponding tax bases used in the computation of taxable profit and is accounted for using the statement of financial position liability method. Deferred tax liabilities are generally recognised for all taxable temporary differences and deferred tax assets are recognised to the extent that it is probable that taxable profits will be available against which deductible temporary differences can be utilised. Such assets and liabilities are not recognised if the temporary difference arises from the initial recognition of goodwill or from the initial recognition (other than in a business combination) of other assets and liabilities in a transaction that affects neither the tax profit nor the accounting profit.

Deferred tax liabilities are recognised for taxable temporary differences arising on investments in subsidiaries, except where the Group is able to control the reversal of the temporary difference and it is probable that the temporary difference will not reverse in the foreseeable future.

The carrying amount of deferred tax assets is reviewed at the date of each statement of financial position and reduced to the extent that it is no longer probable that sufficient taxable profits will be available to allow all or part of the asset to be recovered.

Deferred tax is calculated at the tax rates that are expected to apply in the period when the liability is settled or the asset is realised. Deferred tax is charged or credited in the income statement, except when it relates to items charged or credited directly to equity, in which case the deferred tax is also dealt with in equity.

To the extent that the Group receives a tax deduction relating to share-based payment transactions, deferred tax is provided at the appropriate tax rate on the difference in value between the market price of the underlying equity as at the date of the financial statements and the exercise price of the outstanding share options. As a result, the deferred tax impact of share options will not be derived directly from the expense reported in the consolidated income statement. The amount by which the deductible difference exceeds the cumulative charge to the consolidated income statement is recorded in the consolidated statement of comprehensive income.

Deferred tax assets and liabilities are measured on an undiscounted basis and are offset when there is a legally enforceable right to set off current tax assets against current tax liabilities and when they relate to income taxes levied by the same taxation authority and the Group intends to settle its current tax assets and liabilities on a net basis.

Property, plant and equipment

All property, plant and equipment is shown at original historical cost less accumulated depreciation and any recognised impairment loss.

Assets in the course of construction for production or administrative purposes are carried at cost, less any recognised impairment loss. Depreciation of these assets, on the same basis as other assets in the same class, commences when the assets are ready for their intended use.

Depreciation is charged so as to write off the cost or valuation of assets, less their residual values, other than assets in the course of construction, over their estimated useful lives, using the straight-line method, on the following bases:

Leasehold property improvements	Ten years or, where shorter, over the term of the relevant lease
Plant and machinery	Three to ten years
Furniture, fittings and equipment	Three to five years

Assets held under finance leases are depreciated over their expected useful lives on the same basis as owned assets or, where shorter, over the term of the relevant lease.

The gain or loss arising on the disposal of an asset is determined as the difference between the sales proceeds and the carrying amount of the asset and is recognised in income.

Internally generated intangible assets – research and development expenditure

Expenditure on research activities is recognised as an expense in the period in which it is incurred.

In accordance with IAS 38 Intangible Assets where a project has entered the development phase and is sufficiently self-contained that the expected future economic benefits can be traced directly to the assets developed within the project, it is probable that the expected future economic benefits that are attributable to the asset will flow to the entity, and the cost of the asset can be measured reliably, the development costs related to the project will be capitalised as an intangible asset.

Internally generated intangible assets are amortised on a straight-line basis over their useful lives. Where no internally generated intangible asset can be recognised, development expenditure is recognised as an expense in the period in which it is incurred.

Notes to the consolidated financial statements continued for the year ended 31 December 2017

3. Significant accounting policies continued

Other intangible assets

Costs incurred in maintaining the patent and trademark portfolio are written off to the income statement as incurred.

Payments in respect of software, external product development costs and licence rights acquired are capitalised at cost and amortised on a straight-line basis over their estimated useful lives.

Impairment of tangible and intangible assets excluding goodwill

At the date of each statement of financial position, the Group reviews the carrying amounts of its tangible and intangible assets to determine whether there is any indication that those assets have suffered an impairment loss. If any such indication exists, the recoverable amount of the asset is estimated in order to determine the extent of the impairment loss (if any). Where the asset does not generate cash flows that are independent from other assets, the Group estimates the recoverable amount of the cash-generating unit to which the asset belongs.

Recoverable amount is the higher of fair value less costs to sell and value-in-use. In assessing value-in-use, the estimated future cash flows are discounted to their present value using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset for which the estimates of future cash flows have not been adjusted.

If the recoverable amount of an asset (or cash-generating unit) is estimated to be less than its carrying amount, the carrying amount of the asset (cash-generating unit) is reduced to its recoverable amount. An impairment loss is recognised as an expense immediately.

Where an impairment loss is subsequently reversed, the carrying amount of the asset (or cash-generating unit) is increased to the revised estimate of its recoverable amount, but so that the increased carrying amount does not exceed the carrying amount that would have been determined had no impairment loss been recognised for the asset (or cash-generating unit) in prior years. A reversal of an impairment loss is recognised as income immediately.

Inventories

Inventories are stated at the lower of cost and net realisable value. Cost is calculated using the first in, first out (FIFO) cost formula, by applying the standard cost methodology, with costs including direct materials, direct labour costs and an attributable proportion of manufacturing overheads based on normal levels of activity that have been incurred in bringing the inventories to their present location and condition. Net realisable value represents the estimated selling price less all estimated costs of completion and costs to be incurred in marketing, selling and distribution. Provision is made for obsolete, slow-moving or defective items where applicable.

Financial instruments

Financial assets and financial liabilities are recognised in the Group's statement of financial position when the Group becomes a party to the contractual provisions of the instrument.

Financial assets and financial liabilities are initially measured at fair value. Transaction costs that are directly attributable to the acquisition or issue of financial assets and financial liabilities are added to or deducted from the fair value of the financial assets or financial liabilities, as appropriate, on initial recognition.

Financial assets

All financial assets are recognised and derecognised on a trade date where the purchase or sale of a financial asset is under a contract whose terms require delivery of the financial asset with the timeframe established by the market concerned, and are initially measured at fair value, plus transaction costs.

All financial assets of the Group are classified as 'loans and receivables'.

Loans and receivables

Trade receivables, loans and other receivables that have fixed or determinable payments that are not quoted in an active market are classified as 'loans and receivables'. Loans and receivables are measured at amortised cost using the effective interest method, less any impairment. Interest income is recognised by applying the effective interest rate, except for short term receivables when the recognition of interest would be immaterial.

Effective interest method

The effective interest method is a method of calculating the amortised cost of a debt instrument and of allocating interest income over the relevant period. The effective interest rate is the rate that exactly discounts estimated future cash receipts through the life of the debt instrument, or, where appropriate, a shorter period, to the net carrying amount on initial recognition.

Impairment of financial assets

Financial assets are assessed for indicators of impairment at the date of each statement of financial position. Financial assets are impaired where there is objective evidence that, as a result of one or more events that occurred after the initial recognition of the financial asset, the estimated future cash flows of the investment have been affected.

For financial assets carried at amortised cost, the amount of the impairment is the differences between the asset's carrying amount and the present value of the estimated future cash flows, discounted at the financial asset's original effective interest rate.

3. Significant accounting policies continued

Financial instruments continued

Derecognition of financial assets

The Group derecognises a financial asset only when the contractual rights to the cash flows from the asset expire, or when it transfers the financial asset and substantially all the risks and rewards of ownership of the asset to another entity. If the Group neither transfers nor retains substantially all the risks and rewards of ownership and continues to control the transferred asset, the Group recognises its retained interest in the asset and an associated liability for amounts it may have to pay. If the Group retains substantially all the risks and rewards of ownership of a transferred financial asset, the Group continues to recognise the financial asset and also recognises a collateralised borrowing for the proceeds received.

On derecognition of a financial asset, the difference between the asset's carrying amount and the sum of the consideration received and receivable and the cumulative gain or loss that had been recognised in other comprehensive income and accumulated in equity is recognised in profit or loss.

Financial liabilities and equity

Debt and equity instruments are classified as either financial liabilities or as equity in accordance with the substance of the contractual arrangement.

Financial liabilities

The financial liabilities of the Group are classified as other financial liabilities. Other financial liabilities, including borrowings, are initially measured at fair value, net of transaction costs.

Other financial liabilities are subsequently measured at amortised cost using the effective interest method, with interest expense recognised on an effective yield basis.

The effective interest method is a method of calculating the amortised cost of a financial liability and of allocating interest expense over the relevant period. The effective interest rate is the rate that exactly discounts estimated future cash payments through the expected life of the financial liability or, where appropriate, a shorter period, to the net carrying amount on initial recognition.

Derecognition of financial liabilities

The Group derecognises financial liabilities when, and only when, the Group's obligations are discharged, cancelled or have expired. The difference between the carrying amount of the financial liability derecognised and the consideration paid and payable is recognised in profit and loss.

Derivative financial instruments and hedge accounting

The Group's activities expose it primarily to the financial risks of changes in foreign currency exchange rates and interest rates and liquidity risk.

The Group uses derivative financial instruments (primarily foreign currency forward contracts) to hedge its risks associated with foreign currency fluctuations relating to certain firm commitments and forecast transactions.

The Group's interest rate risk arises mainly from its funds invested in short term bank deposits. To mitigate these risks, limits have been set by the Board in relation to maturity period and maximum deposits with any one institution.

In order to mitigate the Group's liquidity risks, the Group can choose to fund significant fixed asset purchases by finance leases repayable over a period of three to five years dependent on the individual asset being financed and interest-bearing loans.

The use of financial derivatives is governed by the Group's policies approved by the Board of Directors, which provides written principles on the use of financial derivatives consistent with the Group's risk management strategy. The Group does not use derivative financial instruments for speculative purposes.

Derivative financial instruments are initially measured at fair value on the contract date and are remeasured to fair value at subsequent reporting dates.

Changes in the fair value of derivative financial instruments that are designated as hedges of future cash flows and deemed to be effective are recognised directly in equity and the ineffective portion is recognised immediately in the income statement. If the cash flow hedge of a firm commitment or forecast transaction results in the recognition of an asset or a liability, then, at the time the asset or liability is recognised, the associated gains or losses on the derivative that had previously been recognised in equity are included in the initial measurement of the asset or liability. For hedges that do not result in the recognition of an asset or a liability, amounts deferred in equity are recognised in the income statement in the same period in which the hedged item affects net profit or loss. However, when the forecast transaction that is hedged results in the recognition of a non-financial asset or non-financial liability, the gains and losses previously accumulated in equity are transferred from equity and included in the initial measurement of the cost of the non-financial asset or non-financial liability.

Changes in fair value of derivative financial instruments that do not qualify for hedge accounting are recognised in the income statement as they arise.

Notes to the consolidated financial statements continued
for the year ended 31 December 2017

3. Significant accounting policies continued

Derivative financial instruments and hedge accounting continued

Hedge accounting is discontinued when the hedging instrument expires or is sold, terminated, exercised, or no longer qualifies for hedge accounting. At that time, any cumulative gain or loss on the hedging instrument recognised in equity is retained in equity until the forecast transaction occurs. If a hedged transaction is no longer expected to occur, the net cumulative gain or loss recognised in equity is transferred to net profit or loss for the period.

Derivatives embedded in other financial instruments or other host contracts are treated as separate derivatives when their risks and characteristics are not closely related to those of host contracts and the host contracts are not carried at fair value, with gains or losses reported in the income statement.

Investments

Investments are recognised and derecognised on a trade date where a purchase or sale of an investment is under a contract whose terms require delivery of the investment within the time frame established by the market concerned and are initially measured at fair value, equating to cost, including transaction costs. Investments are classified as available for sale, and on the basis that the investments have no active market and their fair values cannot be reliably determined using valuation techniques, the investments are carried at cost.

If there is objective evidence that an impairment loss on an unquoted equity investment that is not carried at fair value because its fair value cannot be reliably measured, the amount of the loss is measured as the difference between the asset's carrying amount and the present value of estimated future cash flows discounted at the current market rate of return for a similar financial asset.

Bonds with fixed or determinable payments and fixed maturity dates that the Group has the positive intent and ability to hold to maturity are classified as held-to-maturity investments. Held-to-maturity investments are measured at amortised cost using effective interest method less any impairment.

Cash and cash equivalents

Cash and cash equivalents comprise cash on hand and demand deposits and other short term highly liquid investments that are readily convertible to a known amount of cash within a period of up to three months post the date of the statement of financial position and are subject to an insignificant risk of changes in value.

Treasury deposits

Treasury deposits comprise demand deposits that are convertible to a known amount of cash with an original maturity of between three months and 12 months and are subject to an insignificant risk of changes in value.

Interest-bearing loans and borrowings

Interest-bearing loans and bank overdrafts are measured initially at fair value, net of direct issue costs. Finance charges, including premiums payable on settlement or redemption and direct issue costs, are accounted for on an accrual basis in the income statement using the effective interest rate method and are added to the carrying amount of the instrument to the extent that they are not settled in the period in which they arise.

Equity instruments

Equity instruments issued by the Company are recorded as the proceeds received, net of direct issue costs.

Provisions

Provisions are recognised when the Group has a present obligation as a result of a past event and it is probable that the Group will be required to settle that obligation. Provisions are measured at the Directors' best estimate of the expenditure required to settle the obligation at the date of the statement of financial position and are discounted where the effect of the time value of money is material.

A restructuring provision is recognised when the Group has developed a detailed formal plan for the restructuring and has raised a valid expectation in those affected that it will carry out the restructuring by starting to implement the plan or announcing its main features to those affected by it, and the plan has reached a stage where the decision is unlikely to be reversed. The measurement of a restructuring provision includes only the direct expenditures arising from the restructuring, which are those amounts that are both necessarily entailed by the restructuring and not associated with the ongoing activities of the entity.

Provisions for the expected cost of warranty obligations under local sale of goods legislation are recognised in the month of sale of the relevant products, at the Directors' best estimate of the expenditure required to settle the Group's obligation.

Share-based payments

The Group has applied the requirements of IFRS 2 Share-based Payment. In accordance with the transitional provisions, IFRS 2 has been applied to all grants of equity instruments after 7 November 2002 that were unvested at 1 January 2005.

The Group issues equity-settled share-based payments to certain employees. These payments are measured at fair value (excluding the effect of non-market based vesting conditions) at the date of grant. The fair value determined at the grant date of the equity-settled share-based payments is expensed on a straight-line basis over the vesting period, based on the Group's estimate of the shares that will eventually vest and adjusted for the effect of non-market based vesting conditions.

3. Significant accounting policies continued

Share-based payments continued

The fair value of options issued under the Group's Long Term Incentive Plan is measured using a stochastic (Monte Carlo binomial) model for grants made with market based vesting conditions since 2007. The fair value of all other equity-settled share-based payments is measured using the Black-Scholes pricing model. The expected life used in these models has been adjusted, based on management's best estimate, for the effects of non-transferability, exercise restrictions and behavioural considerations.

SAYE share options granted to employees are treated as cancelled when employees cease to contribute to the scheme. This results in accelerated recognition of the expenses that would have arisen over the remainder of the original vesting period.

Own shares

Own shares are deducted from equity. No gain or loss is recognised in the income statement on the purchase, sale, issue or cancellation of the Group's own shares.

New standards and interpretations

A number of new standards are effective for annual periods beginning on or after 1 January 2018. The following standards are expected to have an impact on the Group's financial statements in the period of initial application.

IFRS 15 Revenue from Contracts with Customers

IFRS 15 establishes a comprehensive framework for determining whether, how much and when revenue is recognised. It replaces existing revenue recognition guidance, IAS 18 Revenue.

The standard is effective for annual periods beginning on or after 1 January 2018.

Sales of custom-built printing machines

The Group's US subsidiary EPS sells custom-built printing machines to industrial customers. Currently, revenue is recognised when the printer is accepted by the customer, which transfers the risks and rewards of ownership. Revenue is recognised at this point provided that the revenue and costs can be measured reliably and the recovery of the consideration is probable.

Depending on the specific contract terms, revenue may potentially need to be recognised over time for some of the EPS contracts, when one of the conditions in IFRS 15, paragraph 35 is met.

Other revenue streams

For all other revenue streams, IFRS 15 is not expected to have a significant impact on revenue recognition.

Transition

The Group plans to adopt IFRS 15 using the modified retrospective approach, with the cumulative effect of initially applying this standard recognised at the date of initial application (i.e. 1 January 2018). As a result, the Group will not apply the requirements of IFRS 15 to the comparative period presented.

IFRS 16 Leases

IFRS 16 replaces existing leases guidance, including IAS 17 Leases, IFRIC 4 Determining whether an Arrangement contains a Lease, SIC-15 Operating Leases – Incentives and SIC-27 Evaluating the Substance of Transactions Involving the Legal Form of a Lease.

The standard is effective for annual periods beginning on or after 1 January 2019.

IFRS 16 introduces a single, on-statement of financial position lease accounting model for lessees. A lessee recognises a right-of-use asset representing its right to use the underlying asset and a lease liability representing its obligation to make lease payments. There are recognition exemptions for short term leases and leases of low-value items.

The Group has completed an initial assessment of the potential impact on its consolidated financial statements but has not yet completed its detailed assessment. The actual impact of applying IFRS 16 on the financial statements in the period of initial application will depend on future economic conditions, including the Group's Weighted Average Cost of Capital, the composition of the Group's lease portfolio at that date, the Group's latest assessment of whether it will exercise any lease renewal options and the extent to which the Group chooses to use practical expedients and recognition exemptions.

So far, the most significant impact identified is that the Group will recognise new assets and liabilities for its operating leases of factory, research and office facilities. As at 31 December 2017, the Group's future minimum lease payments under non-cancellable operating leases amounted to £4,634,000, on an undiscounted basis (see note 31).

Notes to the consolidated financial statements continued for the year ended 31 December 2017

3. Significant accounting policies continued

IFRS 16 Leases continued

In addition, the nature of expenses related to those leases will now change as IFRS 16 replaces the straight-line operating lease expense with a depreciation charge for right-of-use assets and interest expense on lease liabilities.

The Group does not currently have any finance leases, but were it to take out any in the future, they would not be expected to be significantly impacted by IFRS 16.

Transition

As a lessee, the Group can elect to apply the standard using a retrospective approach, or a modified retrospective approach with optional practical expedients. The lessee applies this election consistently to all of its leases.

The Group plans to apply IFRS 16 initially on 1 January 2019, using the modified retrospective approach. Therefore, the cumulative effect of adopting IFRS 16 will be recognised as an adjustment to the opening balance of retained earnings at 1 January 2019, with no restatement of comparative information.

When applying the modified retrospective approach to leases previously classified as operating leases under IAS 17, the lessee can elect, on a lease-by-lease basis, whether to apply a number of practical expedients on transition. The Group is assessing the potential impact of using these practical expedients.

Other standards

The following new standards, amended standards and interpretations are not expected to have a significant impact on the Group's financial statements:

IFRS 9	Financial Instruments
IFRS 2 (amendments)	Classification and Measurement of Share-based Payment Transactions
IFRIC Interpretation 22	Foreign Currency Transactions and Advance Consideration
IFRIC Interpretation 23	Uncertainty over Income Tax Treatments
Annual Improvements to IFRSs (amendments)	

4. Reconciliation of adjusted financial measures

	2017 £'000	2016 £'000
Profit before tax	**12,290**	17,853
Share-based payment charges	**3,057**	969
Exchange differences on intra-group transactions	**523**	60
Restructuring and acquisition costs	**2,553**	1,205
Research and development expenditure credit	**(411)**	(605)
Adjusted profit before tax	**18,012**	19,482
Capitalised research and development expense and related amortisation	**(5,795)**	(10,222)
Adjusted profit before tax excluding the impact of IAS 38	**12,217**	9,260

Adjusted financial measures are alternative performance measures, which adjust for recurring and non-recurring items that management consider to have a distorting effect on the underlying results of the Group.

Share-based payment charges include the IFRS 2 charge for the period of £2,747,000 per note 32 (2016: £885,000) and the charge relating to National Insurance on the outstanding potential share options of £310,000 (2016: £84,000). These costs were included in the general and administrative expenses in the Consolidated income statement.

4. Reconciliation of adjusted financial measures continued

Exchange differences relating to intra-group transactions represent exchange gains or losses recorded in the Consolidated income statement as a result of operating in the United States and Sweden. These costs were included in the general and administrative expenses in the Consolidated income statement.

Restructuring and acquisition expenses of £2,553,000 (2016: £1,205,000) relate to costs incurred and a provision made in relation to a reorganisation (note 24) and earn-out expenses relating to the acquisition of EPS in 2016.

The research and development expenditure credit relates to the corporation tax relief receivable relating to qualifying research and development expenditure. This item is shown on the face of the Income statement.

Adjusted profit before tax excluding the impact of IAS 38 Capitalisation of Development Costs and net of Thin Film amortisation is the measure that is used internally for setting and comparing achievement of the annual bonus target.

	2017 Pence per share	2016 Pence per share
Diluted earnings per share	**14.0p**	18.9p
Share-based payment charges	**3.9p**	1.2p
Exchange differences on intra-group transactions	**0.7p**	0.2p
Restructuring and acquisition expenses	**3.3p**	1.5p
Tax effect of adjusting items	**(1.2p)**	(0.6p)
Adjusted diluted earnings per share	**20.7p**	21.2p

5. Revenue

An analysis of the Group's revenue is as follows:

	Notes	**2017 £'000**	2016 £'000
Product sales, commissions and fees		**83,758**	82,863
Royalties		**16,384**	13,315
		100,142	96,178
Investment income	9	**192**	449
		100,334	96,627

Notes to the consolidated financial statements continued
for the year ended 31 December 2017

6. Business and geographical segments

Products and services from which reportable segments derive their revenues.

For management reporting purposes, the Group's operations are currently analysed according to the two operating segments of 'product sales, commissions and fees' and 'royalties'. These two operating segments are the basis on which the Group reports its primary segment information and on which decisions are made by the Group's Chief Executive Officer and Board of Directors, and resources allocated. The Group's chief operating decision maker is the Chief Executive Officer.

Segment information is presented below:

Year ended 31 December 2017	Product sales, commissions and fees £'000	Royalties £'000	Unallocated £'000	Consolidated £'000
Revenue				
Total segment revenue	**83,758**	**16,384**	**–**	**100,142**
Result				
Adjusted profit before tax	**1,978**	**15,842**	**192**	**18,012**
Share-based payment charges	**–**	**–**	**(3,057)**	**(3,057)**
Exchange differences relating to intra-group transactions	**(523)**	**–**	**–**	**(523)**
Restructuring and acquisition expenses	**(2,553)**	**–**	**–**	**(2,553)**
Research and development expenditure credit	**411**	**–**	**–**	**411**
(Loss)/profit before tax	**(687)**	**15,842**	**(2,865)**	**12,290**

Investment income is not allocated to reportable segments for the purposes of reporting to the Group's Chief Executive Officer and Board of Directors.

Share-based payment charges include the IFRS 2 charge for the period and the charge relating to National Insurance on the outstanding potential share option gains.

Year ended 31 December 2016	Product sales, commissions and fees £'000	Royalties £'000	Unallocated £'000	Consolidated £'000
Revenue				
Total segment revenue	82,863	13,315	–	96,178
Result				
Adjusted profit before tax	5,718	13,315	449	19,482
Share-based payment charges	–	–	(969)	(969)
Exchange differences relating to intra-group transactions	(60)	–	–	(60)
Restructuring costs	(1,205)	–	–	(1,205)
Research and development expenditure credit	605	–	–	605
Profit/(loss) before tax	5,058	13,315	(520)	17,853

6. Business and geographical segments continued

Segment assets

	2017 £'000	2016 £'000
Product sales, commissions and fees	**123,800**	106,604
Royalties	**1,253**	1,562
Total segment assets	**125,053**	108,166
Investments	**–**	1,000
Treasury deposits	**753**	–
Cash and cash equivalents	**43,944**	49,321
Total assets	**169,750**	158,487

Assets are allocated to the segment which has responsibility for their control.

No information is provided for segment liabilities as this measure is not provided to the chief operating decision maker.

Other segment information

Year ended 31 December 2017	Notes	Product sales, commissions and fees £'000	Royalties £'000	Unallocated £'000	Consolidated £'000
Depreciation and amortisation	14, 15	**8,944**	**–**	**–**	**8,945**
Share-based payment charges				**3,057**	**3,057**
Capital expenditure	14, 15	**11,947**	**–**	**–**	**11,947**

Year ended 31 December 2016	Notes	Product sales, commissions and fees £'000	Royalties £'000	Unallocated £'000	Consolidated £'000
Depreciation and amortisation	14, 15	8,638	–	–	8,638
Share-based payment charges		–	–	969	969
Capital expenditure	14, 15	23,149	–	–	23,149

Revenues from major products and services

	2017 £'000	2016 £'000
Product sales, commissions and fees	**83,758**	82,863
Royalties	**16,384**	13,315
Consolidated revenue (excluding investment income)	**100,142**	96,178

Notes to the consolidated financial statements continued
for the year ended 31 December 2017

6. Business and geographical segments continued

Geographical information

The Group operates in three principal geographical areas: EMEA, Asia and the Americas. Revenues are attributed to geographical areas on the basis of the customers' operating location. The Group's revenue from external customers and information about its segments (non-current assets excluding deferred tax assets and other financial assets) by geographical location is detailed below:

	Revenue from external customers	
	2017 £'000	2016 £'000
EMEA	**29,784**	41,653
Asia		
– China	**32,139**	20,928
– Japan	**18,214**	14,091
– Other	**594**	1,385
The Americas (including USA)	**19,411**	18,121
	100,142	96,178

Non-current assets, being property, plant and equipment, goodwill, other intangible assets, investments, receivables and the deferred tax asset, are attributed to the location where they are situated.

	Non-current assets	
	2017 £'000	2016 £'000
EMEA	**69,932**	68,257
Asia	**15**	27
The Americas (including USA)	**2,836**	2,723
	72,783	71,007

Information about major customers

Included in revenues arising from royalties, is one customer whose revenue exceeds 10% of total revenues, with revenue of £14.7 million (15% of total revenues) (2016: no customer exceeded 10% of total revenues). No other single customer contributed 10% or more to the Group's revenue in either 2017 or 2016. Revenue from the top five customers represents 42% of revenues (2016: 40%).

7. Profit for the year

Profit for the year has been arrived at after charging/(crediting):

	2017 £'000	2016 £'000
Research and development expenses (net of capitalised development costs)*	**12,318**	12,211
Grants towards research and development including the research and development expenditure credit	**(489)**	(605)
Depreciation of property, plant and equipment	**7,795**	7,851
Amortisation of capitalised development costs (included in research and development expenses)	**1,149**	492
Amortisation of software (included in general and administrative expenses)	**25**	295
Loss/(profit) on disposal of property, plant and equipment	**351**	(3)
Cost of inventories recognised as expense	**53,097**	51,511
Impairment of other financial assets (note 19)	**30**	138
Total fees payable to the Company's auditor and its associates	**173**	180

* Total spend on research and development in 2017, before capitalised and amortised development costs included in note 14, was £18,113,000 (2016: £22,433,000).

Grant income includes £411,000 in respect of the research and development expenditure credit and £78,000 from the N2 Business Growth Fund in support of the Xaar 3D Centre.

7. Profit for the year continued

Auditor's remuneration

	2017 £'000	2016 £'000
Fees payable to the Company's auditor for the audit of the Company's annual accounts	**22**	22
Fees payable to the Company's auditor and its associates for other services to the Group		
– The audit of the Company's subsidiaries	**119**	104
Total audit fees	**141**	126
– Interim review	**26**	25
– Taxation compliance services	**6**	9
– Recruitment and remuneration services	**–**	12
– Other services	**–**	8
Total non-audit fees	**32**	54
Total fees payable to the Company's auditor and its associates	**173**	180

The Audit Committee has considered the independence of the auditor in relation to non-audit services throughout the year. A description of the work of the Audit Committee is set out in the Corporate Governance statement on pages 54 to 55.

8. Staff costs

The average monthly number of persons employed by the Group including Executive Directors was as follows:

	2017 Number	2016 Number
Research and development	**113**	127
Sales and marketing	**54**	55
Manufacturing and engineering	**364**	368
Business support	**72**	76
	603	626

Their aggregate remuneration comprised:

	Notes	2017 £'000	2016 £'000
Wages and salaries		**26,918**	25,716
Social security costs		**2,741**	3,013
Pension costs	33	**1,216**	1,357
Share-based payments		**3,057**	969
		33,932	31,055

Share-based payment charges include the IFRS 2 charge for the period and the charge relating to National Insurance on the outstanding potential share option gains.

Notes to the consolidated financial statements continued
for the year ended 31 December 2017

9. Investment income

	2017 £'000	2016 £'000
Interest receivable on cash and bank balances, and treasury deposits	**192**	449

10. Tax

	Notes	2017 £'000	2016 £'000
Current tax – UK		**1,516**	1,546
Current tax – overseas		**(229)**	180
		1,287	1,726
Amounts (over)/under provided in previous years		**(1,102)**	4
Total current income tax		**185**	1,730
Deferred tax – origination and reversal		**279**	608
Adjustment in respect of prior years		**894**	714
Total deferred tax charge	21	**1,173**	1,322
Total tax expense for the year		**1,358**	3,052

The blended standard rate of tax for the year, based on the UK standard rate of corporation tax, is 19.25% (2016: 20.00%). Taxation for other jurisdictions is calculated at the rates prevailing in the respective jurisdictions.

The Finance (No 2) Act 2015 provided for a reduction in the main rate of corporation tax from 20% to 19%, which was effective from 1 April 2017, and a reduction to 18% effective from 1 April 2020. Finance Act 2016, provides for a further reduction in the main rate of corporation tax to 17% effective from 1 April 2020. These rate reductions have been reflected in the calculation of deferred tax at the balance sheet date.

The note to the cash flow statement (note 30) shows repayments of tax of £457,000 during the year (2016: payments of £303,000).

The closing deferred tax liability at 31 December 2017 has been calculated at 17% reflecting the tax rate at which the deferred tax liability is expected to be reversed in future periods. Details on deferred tax liabilities are disclosed in note 21.

In addition to the amount charged to the income statement and other comprehensive income, the following amounts relating to tax have been recognised directly in equity:

	2017 £'000	2016 £'000
Current tax		
Excess tax deductions related to share-based payments on exercised options	**(26)**	(483)
Excess tax deductions in relation to restructuring charges	**–**	(13)
	(26)	(496)
Deferred tax		
Arising on transactions with equity participants:		
Change in estimated excess tax deductions related to share-based payments	**46**	62
Total income tax recognised directly in equity	**20**	(434)

10. Tax continued

The charge for the year can be reconciled to the profit per the income statement as follows:

	2017 £'000	2016 £'000
Profit on ordinary activities before tax	**12,290**	17,853
Tax on ordinary activities at a blended standard rate of 19.25% (2016: 20.00%)	**2,366**	3,571
Effect of:		
Expenses not deductible for tax purposes	**518**	282
Non-deductible/(non-taxable) foreign exchange differences	**126**	(119)
Effect of different tax rates of subsidiaries operating overseas	**19**	69
Enhanced tax deduction for patent box	**(1,411)**	(1,114)
Effect of change in UK corporation tax rate on deferred tax	**(52)**	(355)
Prior year adjustments	**(208)**	718
Total tax expense for the year	**1,358**	3,052

The expenses not deductible for tax purposes mainly relate to depreciation on non-qualifying assets and share-based payments.

The effective tax rate for the year is 11% (2016: 17%). For 2017 if the prior year adjustments were excluded the effective tax rate would have been 13% (2016: 13%).

11. Dividends

	2017 £'000	2016 £'000
Amounts recognised as distributions to equity holders in the year:		
Final dividend for the year ended 31 December 2016 of 6.7p (2015: 6.3p) per share	**5,126**	4,808
Interim dividend for the year ended 31 December 2017 of 3.4p (2016: 3.3p) per share	**2,602**	2,520
Total distributions to equity holders in the year	**7,728**	7,328
Proposed final dividend for the year ended 31 December 2017 of 6.8p (2016: 6.7p) per share	**5,326**	5,212

The proposed final dividend is subject to approval by shareholders at the AGM and has not been included as a liability in these financial statements.

12. Earnings per ordinary share – basic and diluted

The calculation of basic and diluted earnings per share is based on the following data:

	2017 £'000	2016 £'000
Earnings		
Earnings for the purposes of basic earnings per share being net profit attributable to equity holders of the parent	**10,932**	14,801
Number of shares		
Weighted average number of ordinary shares for the purposes of basic earnings per share	**76,469,128**	76,246,300
Effect of dilutive potential ordinary shares:		
Share options	**1,441,475**	1,994,875
Weighted average number of ordinary shares for the purposes of diluted earnings per share	**77,910,603**	78,241,175

Notes to the consolidated financial statements continued
for the year ended 31 December 2017

12. Earnings per ordinary share – basic and diluted continued

	2017 Pence per share	2016 Pence per share
Basic	**14.3p**	19.4p
Diluted	**14.0p**	18.9p

The weighted average number of ordinary shares for the purposes of basic earnings per share is calculated after the exclusion of ordinary shares in Xaar plc held by Xaar Trustee Ltd, the Xaar plc ESOP trust and the matching shares held in trust for the Share Incentive Plan.

For 2017, there were share options granted over 382,843 shares that had not been included in the diluted earnings per share calculation because they were anti-dilutive at the period end (2016: 22,758 shares).

The performance conditions for LTIP awards over 657,355 shares (2016: 1,109,652 shares) have not been met in the current financial period or are not expected to be met in future financial periods, and therefore the dilutive effect of those shares have not been included in the diluted earnings per share calculation.

Adjusted earnings per share

This adjusted earnings per share information is considered to provide a fairer representation of the Group's trading performance year on year, as it removes items which, in the Board's opinion, do not reflect the underlying performance of the Group.

The calculation of adjusted EPS excluding share-based payment charges, exchange differences relating to intra-group transactions, restructuring and acquisition expenses, is based on earnings of:

	2017 £'000	2016 £'000
Earnings for the purposes of basic earnings per share being net profit attributable to equity holders of the parent	**10,932**	14,801
Share-based payment charges	**3,057**	969
Exchange differences relating to intra-group transactions	**523**	60
Restructuring and acquisition expenses	**2,553**	1,205
Tax effect of adjusting items	**(929)**	(447)
Adjusted profit after tax	**16,136**	16,588
Adjusted profit after tax excluding the net of tax impact of IAS 38*	**11,959**	8,410

The denominators used are the same as those detailed above for both basic and diluted earnings per share.

Adjusted earnings per share is earnings per share excluding the items adjusted for as detailed above:

	2017 Pence per share	2016 Pence per share
Adjusted basic	**21.1p**	21.8p
Adjusted diluted	**20.7p**	21.2p
Adjusted basic excluding the impact of IAS 38*	**15.6p**	11.0p

Adjusted EPS is considered to provide a fairer representation of the Group's trading performance year on year.

* Adjusted profit after tax excluding the net of tax impact of IAS 38 and adjusted basic EPS excluding the impact of IAS 38 Capitalisation of Development Costs are the measures deemed most appropriate by the Remuneration Committee to determine the achievement of the performance conditions for the LTIP awards that are subject to the EPS performance conditions.

13. Goodwill

The carrying amount of goodwill at 31 December 2017 was £5,212,000 (2016: £5,776,000).

Goodwill acquired in a business combination is allocated, at acquisition, to the cash-generating units (CGUs) that are expected to benefit from that business combination. Goodwill occurred from the acquisition of EPS in July 2016.

The carrying amount of goodwill had been allocated as follows on page 111.

13. Goodwill continued

	2017 £'000	2016 £'000
Printheads and related products (a single CGU)		
Balance at the beginning of the year	**5,776**	–
Goodwill recognised in the year	**–**	5,776
Foreign currency translation	**(564)**	–
Balance at the end of the year	**5,212**	5,776

The Group tests goodwill annually for impairment or more frequently if there are indications that goodwill might be impaired. Having performed impairment testing, no impairment has been identified and therefore no impairment loss has been recognised in 2017 (2016: £nil).

The recoverable amount of the CGU is determined from a value-in-use calculation. The key assumptions to which the value-in-use calculation is most sensitive are those regarding the discount rates, growth rates and expected changes to selling prices and direct costs during the period.

The Group prepares cash flow forecasts derived from the most recent financial forecasts reviewed by management for the next three years and these have been used in the value-in-use calculation. The discount rate applied to the cash flow projections is 8.1% (2016: 5.4%) and reflects management's estimate of return on capital employed.

Sensitivity analysis has been completed on each key assumption in isolation and this indicates that reasonable changes in key assumptions on which we have based our determination of the recoverable amount would not cause the carrying amount of goodwill to exceed its recoverable amount.

14. Other intangible assets

	Capitalised development costs £'000	Licences acquired £'000	Software £'000	Total £'000
Cost				
At 1 January 2016	22,894	533	3,124	26,551
Additions	10,222	–	76	10,298
Acquisition	–	84	–	84
Transfers	–	–	(27)	(27)
At 1 January 2017	**33,116**	**617**	**3,173**	**36,906**
Additions	6,451	–	19	6,470
Transfers	(17)	(84)	101	–
Exchange movements	–	–	(6)	(6)
Disposals	–	–	(64)	(64)
At 31 December 2017	**39,550**	**533**	**3,223**	**43,306**
Amortisation				
At 1 January 2016	5,443	533	2,780	8,756
Charge for the year	492	–	295	787
At 1 January 2017	**5,935**	**533**	**3,075**	**9,543**
Charge for the year	1,124	–	25	1,149
Disposals	–	–	(64)	(64)
At 31 December 2017	**7,059**	**533**	**3,036**	**10,628**
Carrying amount				
At 31 December 2016	27,181	84	98	27,363
At 31 December 2017	**32,491**	**–**	**187**	**32,678**

Notes to the consolidated financial statements continued for the year ended 31 December 2017

14. Other intangible assets continued

Capitalised development costs relate to platform technology development and other associated product development. Included within capitalised development costs is a carrying amount of £30,857,000 relating to the P4 Thin Film platform, an architecture that will be used by the Group to generate multiple products across multiple markets. The estimated useful economic life of the platform is 20 years and the remaining amortisation period is 19 years.

The amortisation period for software is three to five years.

Licences acquired are amortised over their estimated useful lives which is on average ten years.

15. Property, plant and equipment

	Land and buildings £'000	Leasehold property £'000	Plant and machinery £'000	Furniture, fittings and equipment £'000	Assets in the course of construction £'000	Total £'000
Cost						
At 1 January 2016	–	13,634	65,044	4,110	1,739	84,527
Additions	1,152	671	8,696	78	910	11,507
Acquisition	–	387	613	260	–	1,260
Transfers	–	2	17	–	8	27
Exchange movements	78	236	966	57	–	1,337
Disposals	–	(31)	–	(13)	–	(44)
At 1 January 2017	**1,230**	**14,899**	**75,336**	**4,492**	**2,657**	**98,614**
Additions	–	185	4,673	134	485	5,477
Transfers	–	(78)	(744)	(12)	834	–
Exchange movements	(105)	(69)	(123)	(47)	(2)	(346)
Disposals	–	–	(930)	(378)	–	(1,308)
At 31 December 2017	**1,125**	**14,937**	**78,212**	**4,189**	**3,974**	**102,437**
Depreciation						
At 1 January 2016	–	7,709	42,317	3,246	–	53,272
Charge for the year	57	1,435	6,080	279	–	7,851
Exchange movements	–	208	923	38	–	1,169
Disposals	–	(21)	–	(9)	–	(30)
At 1 January 2017	**57**	**9,331**	**49,320**	**3,554**	**–**	**62,262**
Charge for the year	–	1,482	6,124	189	–	7,795
Exchange movements	–	(15)	(72)	(47)	–	(134)
Disposals	–	–	(579)	(378)	–	(957)
At 31 December 2017	**57**	**10,798**	**54,793**	**3,318**	**–**	**68,966**
Carrying amount						
At 31 December 2016	1,173	5,568	26,016	938	2,657	36,352
At 31 December 2017	**1,068**	**4,139**	**23,419**	**871**	**3,974**	**33,471**

As at 31 December 2017 the Group had entered into contractual commitments for the acquisition of property, plant and equipment amounting to £1,030,000 (2016: £2,295,000).

16. Subsidiaries

A list of the investments in subsidiaries, including the name, country of incorporation and proportion of ownership interest, is given in note 9 to the Company's separate financial statements.

17. Investments

	2017 £'000	2016 £'000
Held-to-maturity investments		
At beginning of the year	**1,000**	1,000
Disposals	**(1,000)**	–
At the end of the year	**–**	1,000

Held-to-maturity investments were bonds returning interest at 3% per annum, which were due to mature on 22 November 2018. The option to redeem the bonds was exercised on 21 November 2017.

18. Inventories

	2017 £'000	2016 £'000
Raw materials and consumables	**8,533**	6,465
Work in progress	**3,027**	2,153
Finished goods	**7,559**	5,172
	19,119	13,790

19. Other financial assets

The fair value of all financial assets and financial liabilities approximates their carrying value.

Receivables

	2017 £'000	2016 £'000
Non-current portion of Trade Receivables	**858**	1,516

The non-current receivable relates to a last time buy offer and has a settlement term of 23 months. A Fair Value assessment was carried out, however, due to the immaterial value of the estimate, no adjustment was made in the non-current valuation of the receivable balance.

Trade and other receivables

	2017 £'000	2016 £'000
Amount receivable for the sale of goods	**25,722**	15,210
Allowance for doubtful debts	**(510)**	(480)
	25,212	14,730
Other debtors	**2,373**	3,248
Prepayments	**2,718**	2,362
	30,303	20,340

Current tax asset	**3,412**	3,029

No amounts are expected to be settled in more than 12 months.

Notes to the consolidated financial statements continued
for the year ended 31 December 2017

19. Other financial assets continued

Trade receivables

The average credit period taken on sales of goods is 92 days (2016: 62 days). No interest is charged on the receivables for the period agreed in the Requirements Contract or, if not specified or applicable, the first 30 days from the date of the invoice. Thereafter, the Group reserves the right to charge interest at a daily rate of the greater of either 3% per annum above the base rate of the Bank of England from time to time, or the maximum rate of interest allowable under the Late Payment of Commercial Debts (Interest) Act 1998, on all sums outstanding until payment in full is received. The Group provides for receivables over 90 days based on estimated irrecoverable amounts determined by reference to past default experience of the counterparty and an analysis of the counterparty's current financial position.

The maximum exposure to credit risk is the carrying amount of the financial assets as disclosed on page 113. Before accepting any new customer, the Group uses an external credit scoring system to assess the potential customer's credit quality and defines credit limits by customer. Credit limits are reviewed at least once per year. Letters of credit may be used. Credit insurance has typically been taken out over the most significant customers. Of the trade receivables balance at the end of the year, four customers each represented greater than 5% of the total receivables balance, totalling £16.9 million (2016: £9.3 million). The total due from these customers represents 17% (2016: 10%) of the Group's revenue.

Included in the Group's trade receivables balance are debtors with a carrying amount of £4.7 million (2016: £2.8 million) which are past due at the reporting date for which the Group has not provided as there has not been a significant change in credit quality and the amounts are still considered recoverable. Of these amounts, the Group is in possession of letters of credit to the value of £1,867,000 (2016: £853,000) which had not reached maturity as at the reporting date. The Group does not hold any other collateral over these balances. The average age of these receivables is 72 days (2016: 83 days).

Ageing of past due but not impaired receivables:

	2017 £'000	2016 £'000
1–30 days overdue	**2,886**	537
30–60 days overdue	**358**	431
60–90 days overdue	**257**	(45)
90–120 days overdue	**273**	164
Over 120 days overdue	**67**	190
Total	**3,841**	1,277
Non-current receivables		
Over 12 months	**858**	1,516
Total receivables	**4,699**	2,793

Movement in the allowance for doubtful debts:

	2017 £'000	2016 £'000
Balance at the beginning of the year	**480**	342
Impairment losses increased	**30**	138
Balance at the end of the year	**510**	480

In determining the recoverability of a trade receivable, the Group considers any change in the credit quality of the trade receivable from the date credit was initially granted up to the reporting date. The concentration of credit risk is limited due to the customer base being large and unrelated. Accordingly, the Directors believe that there is no further credit provision required in excess of the allowance for doubtful debts.

19. Other financial assets continued

Trade receivables continued

Ageing of impaired trade receivables:

	2017 £'000	2016 £'000
Current	**190**	222
1–30 days overdue	**–**	20
30–60 days overdue	**–**	3
60–90 days overdue	**–**	–
90–120 days overdue	**–**	5
Over 120 days overdue	**320**	230
Total	**510**	480

The Directors consider that the carrying amount of trade and other receivables approximates their fair value.

Treasury deposits

Treasury deposits comprise bank deposits with an original maturity of between three months and 12 months. The carrying amount of these assets approximates their fair value.

	2017 £'000	2016 £'000
Treasury deposits	**753**	–

Cash and cash equivalents

Cash and cash equivalents comprise cash held by the Group and short term bank deposits with an original maturity of three months or less. The carrying amount of these assets approximates their fair value.

The analysis of cash and short term bank deposits is as follows:

	2017 £'000	2016 £'000
Cash	**43,944**	49,321

The credit risk on liquid funds and derivative financial instruments is limited because the counterparties are banks with high credit ratings assigned by international credit rating agencies.

20. Financial instruments

Categories of financial instruments

Financial assets of £73,193,000 (2016: £68,815,000) are categorised as cash, treasury deposits and trade and other receivables. Financial liabilities of £16,750,000 (2016: £14,571,000) are categorised as trade and other payables and other financial liabilities.

Financial risk management objectives

The Group's policy is to manage the Group's financial risk, secure cost effective funding for the Group's operations and to minimise the adverse effects of fluctuations in the financial markets on the value of the Group's financial assets and liabilities, on reported profitability and on the cash flows of the Group.

The Group finances its activities with a combination of cash and treasury deposits. Other financial assets and liabilities, such as trade debtors and trade creditors, arise directly from the Group's operating activities.

Financial instruments give rise to foreign currency, interest rate, credit and liquidity risk. The Group's management of its exposure to credit risk is discussed in note 19 and to liquidity risk is discussed in note 23.

Notes to the consolidated financial statements continued for the year ended 31 December 2017

20. Financial instruments continued

Interest rate risk

As the Group currently has no borrowings, its exposure to interest rate risk relates to the interest rate on its cash, cash equivalent and treasury deposit balances.

The Group's exposure has been calculated with reference to these balances as at the year end. A 2% increase or a reduction to 0% represents management's assessment of the reasonably possible change in interest rates.

If interest rates had been 2% higher/reduced to 0% and all other variables were held constant, the Group's profit for the year ended 31 December 2017 would increase by £0.9 million or decrease by £0.2 million (2016: increase by £1.4 million/decrease by £0.5 million). There would be no effect on equity reserves.

Foreign currency risk

The Group receives approximately 28% of its revenues in US Dollars and 8% of its revenue in Euros, which are partially naturally hedged by supplies in these currencies, but the remainder requires conversion into Sterling in order to fund the remaining costs of the UK operations. The Group had a manufacturing facility in Sweden which was closed in 2016 and legacy working capital balances denominated in Swedish Kronor remain in the Group's Swedish companies prior to the dissolution of these entities.

The Group is mainly exposed to foreign currency risk resulting from transactions in US Dollars, Euros and Swedish Kronor. The following table demonstrates the Group's sensitivity to a 10% increase and decrease in the Sterling exchange rate against the relevant foreign currencies on the Group's profit before tax and equity (due to changes in the fair value of monetary assets, liabilities and forward currency contracts). 10% represents management's assessment of the reasonably possible movement in exchange rates. The sensitivity analysis includes only outstanding foreign currency denominated monetary items and adjusts their translation at the period end for a 10% change in foreign currency rates. The sensitivity analysis includes inter company balances within the Group where the denomination of the balance is in a currency other than the functional currency of the debtor or the creditor. A positive number below indicates an increase in profit or equity.

	Euro currency impact		US Dollar currency impact		Swedish Kronor currency impact	
	2017 £'000	2016 £'000	**2017 £'000**	2016 £'000	**2017 £'000**	2016 £'000
Effect of a 10% increase in relevant exchange rate on:						
Profit or loss	**(200)**	(312)	**(927)**	(637)	**(144)**	(73)
Other equity	**–**	–	**(289)**	113	**151**	376
Effect of a 10% decrease in relevant exchange rate on:						
Profit or loss	**245**	382	**1,132**	779	**176**	89
Other equity	**–**	–	**353**	82	**(185)**	(240)

20. Financial instruments continued

Capital risk management

The primary objective of the Group's capital management is to ensure that it maintains a strong credit rating and healthy capital ratios in order to support its business, maximise shareholder value and provide flexibility for value enhancing investments. The Group manages its capital structure and makes adjustments to it in light of changes in economic conditions or as a result of corporate strategy. To maintain or adjust the capital structure, the Group may adjust the dividend payment to shareholders, return capital to shareholders or issue new shares. In addition, any potential value enhancing investments may be funded through additional debt instruments. No changes were made in the objectives, policies or processes during the current or prior year, except for the proposed increase in final dividend for 2017, as detailed in note 11 on page 109.

The Group monitors capital using a gearing ratio, which is determined as the proportion of debt to equity. Debt is defined as long and short term borrowings. Equity includes all capital and reserves of the Group attributable to the equity holders of the parent. The Group's policy for its existing business is to use debt where appropriate, whilst maintaining the gearing ratio at a level under 10%.

The gearing ratio at the year-end is as follows:

	2017 £'000	2016 £'000
Net debt	**–**	–
Equity	**147,748**	140,456
Gearing ratio	**0%**	0%

The Group is not subject to externally imposed capital requirements.

Credit risk management

Credit risk refers to the risk that a counterparty will default on its contractual obligations resulting in financial loss to the Group. The Group has adopted a policy of only dealing with creditworthy counterparties and obtaining sufficient collateral where appropriate, as a means of mitigating the risk of financial loss from defaults.

Trade receivables consist of a large number of customers, spread across different industries and geographical areas. Ongoing credit evaluation is performed on the financial condition of accounts receivable.

The credit risk on liquid funds is limited because the counterparties are banks with high credit ratings assigned by international credit rating agencies.

21. Deferred tax

The following are the major deferred tax liabilities and assets recognised by the Group and movements thereon during the current and prior reporting periods:

	Accelerated tax depreciation £'000	Share-based payment £'000	Untaxed reserves £'000	Tax losses £'000	Other temporary difference £'000	Total £'000
At 1 January 2016	2,230	(478)	301	(591)	(240)	1,222
Charge/(credit) to income	1,388	(80)	(301)	387	(73)	1,322
Charge to equity	–	62	–	–	–	62
Acquisition of subsidiary	–	–	–	–	81	81
At 1 January 2017	**3,618**	**(496)**	**–**	**(204)**	**(232)**	**2,686**
Charge/(credit) to income	1,601	(99)	–	99	(428)	1,173
Charge to equity	–	46	–	–	–	46
At 31 December 2017	**5,219**	**(549)**	**–**	**(105)**	**(660)**	**3,905**

Notes to the consolidated financial statements continued for the year ended 31 December 2017

21. Deferred tax continued

Certain deferred tax assets and liabilities have been offset. The following is the analysis of the deferred tax balances (after offset) for financial reporting purposes:

	2017 £'000	2016 £'000
Deferred tax liabilities	**3,905**	2,686

The increase in the deferred tax liability arose from increased claims for 100% research and development allowances and also from an election to treat capitalised research and development expenditure as revenue.

As at 31 December 2017, the Group has unused capital losses of £1.1 million (2016: £1.1 million) available for offset against future gains. No deferred tax asset has been recognised in respect of these capital losses as it is not considered probable that there will be future chargeable gains available. These losses may be carried forward indefinitely.

22. Trade and other payables

	2017 £'000	2016 £'000
Trade payables and accruals	**16,583**	14,314

Trade payables and accruals principally comprise amounts outstanding for trade purchases and ongoing costs. The average credit taken for trade purchases is 31 days (2016: 17 days).

The Directors consider that the carrying amount of trade payables approximates to their fair value.

23. Other financial liabilities

Other financial liabilities consist of lease incentives.

The borrowings are repayable as follows:

	2017 £'000	2016 £'000
Within one year	**30**	69
In the second year	**31**	40
In the third to fifth years inclusive	**71**	86
Over five years	**35**	62
	167	257
Less: amount due for settlement within 12 months (shown under current liabilities)	**(30)**	(69)
Amount due for settlement after 12 months	**137**	188

The amounts included above are not considered to be materially different from the present value of their carrying amounts.

Liquidity risk

The Group aims to mitigate liquidity risk by managing cash generation by its operations and applying cash collection targets throughout the Group. Investment is carefully controlled, with authorisation limits operating up to Group Board level and cash payback periods applied as part of the investment appraisal process. In this way the Group aims to maintain a good credit rating to facilitate fund raising.

In its funding strategy, the Group's objective is to maintain a balance between continuity of funding and flexibility through the use of overdrafts, bank loans, finance leases and hire purchase contracts. The Group manages liquidity risk by maintaining adequate reserves and banking facilities by continually monitoring cash flows and matching the maturity profiles of financial assets and liabilities.

Non-derivative financial liabilities of £16,750,000 (2016: £14,571,000) comprise trade creditors of £16,583,000 and lease incentives of £167,000. The trade creditors are within current liabilities. Of the lease incentives, £30,000 are within current liabilities and £137,000 within non-current liabilities with a range of maturity dates which are set out above. The inherent liquidity risk of these financial liabilities is managed within the overall liquidity risk of the Group as described above.

23. Other financial liabilities continued

Liquidity risk continued

The Group is inherently a net generator of cash at the operating level. Excess cash used in managing liquidity is only invested in financial instruments exposed to insignificant risk of changes in market value, being placed on interest-bearing deposit with maturities no more than 12 months allowed per the policy. Short term flexibility is achieved by overdraft facilities.

24. Provisions

	Warranty and commercial agreements £'000	Restructuring £'000	Total £'000
At 1 January 2016	304	3,229	3,533
Additional provision in the year	81	–	81
Utilisation of provision	(159)	(2,614)	(2,773)
Release of provision	(67)	–	(67)
At 1 January 2017	**159**	**615**	**774**
Additional provision in the year	231	1,125	1,356
Utilisation of provision	(128)	–	(128)
Release of provision	(91)	–	(91)
At 31 December 2017	**171**	**1,740**	**1,911**

The warranty and commercial agreements provision represents management's best estimate of the Group's liability related to claims against product warranties or commercial sales agreements. The timing of the utilisation of this provision is uncertain.

During 2017, the Group committed to consolidate its office and research facilities in the Cambridge area. Following the announcement of the plan, the Group has recognised a provision of £1,099,000 for expected restructuring costs, including accelerated depreciation of leasehold property, dilapidation costs of restoring the leases to their original condition, and rent, service charge and business rates on the related lease contracts which had become onerous. It is not expected that the Group will sublet the leases. The remaining provision of £641,000 represents the balance of the estimated final costs of the closure of the manufacturing facility in Sweden.

25. Share capital

	2017 £'000	2016 £'000
Issued and fully paid:		
78,329,296 (2016: 77,776,755) ordinary shares of 10.0p each	**7,833**	7,778

The Companies Act 2006 abolished the legal requirement for a company to have an authorised share capital. The Articles of Association were amended to remove the authorised share capital article following approval via special resolution at the AGM on 19 May 2010.

The movement during the year on the Company's issued and fully paid shares was as follows:

	2017 Number	2016 Number	**2017 £'000**	2016 £'000
At beginning of year	**77,776,755**	77,635,374	**7,778**	7,764
Exercise of share options	**552,541**	141,381	**55**	14
At end of year	**78,329,296**	77,776,755	**7,833**	7,778

The Company has one class of ordinary shares which carry no right to fixed income.

Notes to the consolidated financial statements continued for the year ended 31 December 2017

25. Share capital continued

Scheme	Date of grant	Number of shares under option as at 31 December 2017	Number of shares under option as at 31 December 2016	Subscription price per share
Xaar plc 2004 Share Option Plan	21 August 08	**1,000**	1,000	108.25p
	22 November 10	**10,000**	10,000	211.0p
	1 June 11	**75,091**	102,591	250.0p
	1 May 12	**105,000**	172,500	226.5p
		191,091	286,091	
Xaar plc Share Save Scheme	1 November 13	**–**	2,568	616.0p
	1 November 14	**54,896**	486,240	338.0p
	1 November 15	**170,759**	227,980	417.0p
	1 November 16	**147,297**	210,649	407.0p
		372,952	927,437	
Xaar plc 2017 Share Save Scheme	1 November 17	**389,243**	–	344.0p
		389,243	–	
Xaar plc Share Incentive Plan	17 April 13	**13,796**	17,472	0.0p
	16 April 14	**15,973**	20,092	0.0p
	14 April 16	**23,070**	27,335	0.0p
	13 April 17	**12,174**	–	0.0p
		65,013	64,899	
Total share options outstanding at 31 December		**1,018,299**	1,278,427	

Options granted under the Xaar plc 2004 Share Option Plan are ordinarily exercisable within three to ten years after the date of the grant. The maximum value of approved options, under the Xaar plc 2004 Share Option Plan, which may be granted to individual employees is £30,000.

Options under the Xaar plc Share Save Scheme are ordinarily exercisable between 36 and 42 months after the date of the grant.

Awards under the Xaar plc Share Incentive Plan are ordinarily exercisable between three and five years after the date of the grant.

25. Share capital continued

Long Term Incentive Plan

Performance Share Awards outstanding under the Xaar plc 2007 Long Term Incentive Plan are as follows:

Date of grant	Number of shares under option as at 31 December 2017	Number of shares under option as at 31 December 2016
3 May 11	**7,081**	14,762
2 April 12	**60,417**	120,834
1 May 12	**80,599**	88,162
2 April 14	**–**	194,636
12 May 14	**–**	34,083
2 April 15	**489,780**	547,795
28 September 15	**23,926**	37,896
7 December 15	**12,088**	12,088
1 April 16	**400,936**	484,796
11 May 16	**59,027**	69,838
27 May 16	**18,000**	18,000
25 August 16	**57,710**	69,121
6 September 16	**8,250**	9,150
1 December 16	**29,840**	29,840
	1,247,654	1,731,001

All awards under this scheme are exercisable within three to ten years after the date of grant.

Performance share awards have been made under the Xaar plc 2017 Long Term Incentive Plan as follows:

Date of grant	2017 Number of shares	2016 Number of shares
16 May 17	**745,291**	–
	745,291	–

All awards under this scheme are exercisable within three to ten years after the date of grant.

26. Share premium account

	£'000
Balance at 1 January 2016	27,585
Premium arising on issue of equity shares	269
Balance at 1 January 2017	**27,854**
Premium arising on issue of equity shares	1,463
Balance at 31 December 2017	**29,317**

27. Own shares

	£'000
Balance as at 1 January 2016	(3,796)
Transfer to share incentive plan	154
Balance at 1 January 2017 and 31 December 2017	**(3,642)**

Notes to the consolidated financial statements continued for the year ended 31 December 2017

27. Own shares continued

Of this balance, £20,000 (2016: £20,000) represents 91,250 ordinary shares in Xaar plc held in trust by Xaar Trustee Limited. Xaar Trustee Limited was formed in 1995 to act as Trustee to the Employee Benefit Trust established in 1995 to hold shares for the benefit of the employees of the Company and the Group. There has been no movement in the number of shares held in trust by Xaar Trustee Ltd during the year.

The remaining balance of £3,622,000 (2016: £3,622,000) represents the cost of 1,317,727 (2016: 1,317,727) shares in Xaar plc purchased in the market at market value and held by the Xaar plc ESOP trust to satisfy options granted under the Company's share option schemes.

The market value of own shares as at 31 December 2017 was £5,210,000 (2016: £5,636,000).

28. Translation reserve

	£'000
Balance at 1 January 2016	99
Exchange differences on retranslation of net investment	708
Balance at 1 January 2017	**807**
Exchange differences on retranslation of net investment	(194)
Balance at 31 December 2017	**613**

Exchange differences relating to the translation of the net assets of the Group's foreign operations, which relate to subsidiaries only, from their functional currency into the parent's functional currency, being Sterling, are recognised directly in the translation reserve.

29. Retained earnings and other reserves

	Notes	Merger reserve £'000	Share-based payments £'000	Other reserves £'000	Total other reserves £'000	Retained earnings £'000	Total £'000
Balance at 1 January 2016		1,105	9,416	485	11,006	87,880	98,886
Net profit for the year		–	–	–	–	14,801	14,801
Share issue related to LTIP awards		–	–	–	–	(2)	(2)
Own shares acquired in the period		–	–	–	–	(17)	(17)
Dividends paid	11	–	–	–	–	(7,328)	(7,328)
Tax taken directly to equity		–	–	–	–	434	434
Movement in valuation of share options		–	885	–	885	–	885
Balance at 1 January 2017		**1,105**	**10,301**	**485**	**11,891**	**95,768**	**107,659**
Net profit for the year		–	–	–	–	10,932	10,932
Dividends paid	11	–	–	–	–	(7,728)	(7,728)
Tax taken directly to equity		–	–	–	–	(20)	(20)
Exchange differences on retranslation of net investment		–	–	–	–	(527)	(527)
Movement in valuation of share options		–	2,747	–	2,747	–	2,747
Balance at 31 December 2017		**1,105**	**13,048**	**485**	**14,638**	**98,425**	**113,063**

The merger reserve and other reserves are not distributable. The merger reserve represents the share premium account in Xaar Technology Limited. The share-based payment reserve represents the cumulative charge made under IFRS 2 in relation to share options and LTIP awards. Other reserves represent the non-distributable portion of the dividend received in Xaar plc from Xaar Digital Limited.

30. Notes to the cash flow statement

	2017 £'000	2016 £'000
Profit before tax	**12,290**	17,853
Adjustments for:		
Share-based payments	**3,057**	969
Depreciation of property, plant and equipment	**7,795**	7,851
Amortisation of intangible assets	**1,149**	787
Research and development expenditure credit	**(411)**	(605)
Investment income	**(186)**	(449)
Foreign exchange losses/(gains)	**32**	(956)
Loss/(profit) on disposal of property, plant and equipment	**351**	(3)
Increase/(decrease) in provisions	**1,133**	(2,759)
Operating cash flows before movements in working capital	**25,210**	22,688
(Increase)/decrease in inventories	**(5,071)**	2,841
Increase in receivables	**(9,226)**	(8,910)
Increase/(decrease) in payables	**1,103**	(2,381)
Cash generated by operations	**12,016**	14,238
Income taxes received/(paid)	**457**	(303)
Net cash from operating activities	**12,473**	13,935

31. Operating lease arrangements

	2017 £'000	2016 £'000
Minimum lease payments under operating leases recognised as an expense in the year:		
Fixtures, fittings and equipment	**93**	104
Land and buildings	**1,689**	2,183
	1,782	2,287

At the date of the statement of financial position, the Group had outstanding commitments for future minimum lease payments under non-cancellable operating leases, which fall due as follows:

	Fixtures, fittings and equipment		Land and buildings	
	2017 £'000	2016 £'000	2017 £'000	2016 £'000
Within one year	**76**	96	**1,539**	1,608
In the second to fifth years inclusive	**94**	149	**2,402**	2,842
After five years	**–**	–	**523**	909
	170	245	**4,464**	5,359

The operating leases in respect of fixtures, fittings and equipment extend over a period of up to five years.

Notes to the consolidated financial statements continued
for the year ended 31 December 2017

32. Share-based payments

Equity-settled share option scheme

The Company's share option schemes are open to all employees of the Group. Options are exercisable at a price equal to the average quoted market price of the Company's shares on the date of grant. The standard vesting period is three years.

An option granted under the Xaar plc 2004 Share Option Plan before 2011 will be exercisable over shares with a market value at the date of grant not exceeding a person's annual salary if at the third anniversary of grant the EPS growth of the Company since grant has exceeded the growth in the Retail Prices Index (RPI) over the same period by at least 12%. To the extent that an option relates to shares with a market value as at the date of grant in excess of a person's annual salary, the option will be exercisable over all of the excess shares if EPS growth over this period has exceeded RPI growth by at least 15%. For EPS performance between these two points, options will be exercisable over the excess shares on a sliding scale. In addition, options can only be exercised if EPS is at least 5.5 pence for the financial year preceding the third anniversary of grant. Performance may be retested once only from the date of grant to the fourth or fifth anniversary of grant (at the discretion of the Remuneration Committee), but the original EPS growth targets will be increased from 12/15% to 16/20% and 20/25% respectively. The 5.5 pence target will apply for the final financial year in the extended period.

An option granted under the Xaar plc 2004 Share Option Plan from 2011 onwards will be exercisable over shares with a market value at the date of grant not exceeding a person's annual salary, if at the third anniversary of grant, Xaar plc has achieved positive adjusted profit before tax as shown in the consolidated income statement in the Company's Annual Report and financial statements for any of the three years ending during the vesting period. One third of the shares subject to the option granted rounded to the nearest whole share, will vest based on the performance condition being met per year for each of the three years ending in the vesting period. If the adjusted profit before tax as shown in the consolidated income statement in Xaar plc's Annual Report and financial statements for any relevant year is restated before the option becomes exercisable, the restated figure shall, unless the Remuneration Committee determines otherwise, be applied in determining whether the above targets are met. In addition, options shall only become exercisable in respect of any shares if the Committee in its absolute discretion determines that the overall financial performance of Xaar plc over the performance period is satisfactory.

The Xaar 2007 and 2017 Share Save Schemes provide an opportunity to all UK employees to save a set monthly amount (up to £250 pre 2014, up to £500 from 2014) over three years towards the exercise of a discounted share option, which is granted at the start of the three years.

The Xaar Share Incentive Plan provides an opportunity for all UK employees to buy shares from their pre-tax remuneration up to the limit permitted by the relevant tax legislation (£1,500 per year for the awards made in 2013 and 2014, £1,800 per year for awards made from 2015) and are awarded additional shares for free on a matching basis; the Company currently operates the plan on the basis of a 1:1 match but may award matching shares up to the maximum ratio permitted by the relevant tax legislation (currently a 2:1 ratio).

Options and awards under the Xaar 2007 and 2017 Share Save Schemes and Xaar Share Incentive Plan are not subject to performance conditions.

If the options remain unexercised after a period of ten years from the date of grant, or 42 months in the case of the Share Save Scheme, or five years in the case of the Share Incentive Plan (being the contractual lives), the options expire. Save as permitted in the share option scheme rules, options lapse on an employee leaving the Group.

Details of the share options outstanding during the year are as follows:

	2017		2016	
	Number of share options	**Weighted average exercise price (£)**	Number of share options	Weighted average exercise price (£)
Outstanding at beginning of year	**1,280,204**	**3.14**	1,259,654	3.14
Granted during the year	**411,576**	**3.33**	243,467	3.57
Lapsed during the year	**(186,840)**	**3.83**	(97,552)	4.25
Exercised during the year	**(486,641)**	**3.10**	(125,365)	2.25
Outstanding at the end of the year	**1,018,299**	**3.22**	1,280,204	3.14
Exercisable at the end of the year	**275,756**	**2.30**	306,131	2.25

The weighted average share price at the date of exercise for share options exercised during the period was £4.58 (2016: £4.61). The options outstanding at 31 December 2017 had a weighted average remaining contractual life of three years (2016: four years). In 2017, options were granted on 13 April and 1 November. The aggregate of the estimated fair values of the options granted on those dates is £0.61 million. In 2016, options were granted on 14 April and 1 November. The aggregate of the estimated fair values of the options granted on those dates is £0.58 million.

32. Share-based payments continued

Equity-settled share option scheme continued

The inputs into the Black-Scholes model are as follows:

	2017	2016
Weighted average share price	**£4.28**	£5.04
Weighted average exercise price	**£3.33**	£4.03
Weighted average expected volatility	**35%**	51%
Expected life	**3 years**	3 years
Risk-free rate	**0.50%**	0.33%
Weighted average expected dividends	**0.59%**	0.56%

Expected volatility was determined by calculating the historical volatility of the Group's share price over periods ranging from the previous one to three years. The expected life used in the model has been adjusted, based on management's best estimate, for the effects of non-transferability, exercise restrictions and behavioural considerations.

Long Term Incentive Plan

The Company's Long Term Incentive Plan is open to all employees of the Group.

All LTIP share awards granted before 2015 are subject to the achievement of EPS performance conditions, the number of shares that vest will depend on the EPS growth of the Company for the three financial years of the Company commencing on 1 January of the year of grant, as follows:

(1) None of the Awards will vest if the Company's EPS growth does not exceed growth in the Retail Prices Index (RPI) by at least 4% compound p.a.
(2) 35% of the Awards will vest if the Company's EPS growth exceeds growth in the RPI by at least 4% compound p.a.
(3) All of the Awards will vest if the Company's EPS growth exceeds growth in the RPI by at least 10% compound p.a.
(4) Awards will vest on a straight-line basis for EPS growth in excess of growth in the RPI of between 4% and 10% compound p.a.

LTIP share awards granted in 2015 onwards are subject to the achievement of different performance conditions depending on the level of the employee. The number of shares that vest will depend on achievement of performance conditions for the three financial years of the Company commencing on 1 January of the year of grant, and are subject to one, two, three or four of the conditions as set out below:

(1) Absolute cumulative EPS performance over the period, whereby 25% of the Awards will vest if the threshold target is achieved, below threshold 0% will vest and up to a maximum of 100% if the maximum EPS target or higher is achieved.
(2) For 2015 and 2016 grants,TSR relative to FTSE TechMARK All Share Index, whereby 25% of the Awards will vest if the median rank in the comparator group is achieved, below median 0% will vest and up to a maximum of 100% if the upper quartile or higher is achieved. For 2017 grants,TSR outperformance multiplier determined by comparison to the FTSE Small Cap Index, whereby a performance multiplier of between 116.7% (for upper quartile performance) and 150% or 200% (for upper decile performance) is applied to the base award relating to awards granted with EPS and revenue performance conditions.
(3) Achievement of positive adjusted profit before tax as shown in the consolidated income statement in the Company's Annual Report and Accounts for any of the three years ending during the vesting period. One third of the shares subject to the option granted rounded to the nearest whole share, will vest based on the performance condition being met per year for each of the three years ending in the vesting period. If the adjusted profit before tax as shown in the consolidated income statement in Xaar plc's Annual Report and Accounts for any relevant year is restated before the option becomes exercisable, the restated figure shall, unless the Remuneration Committee determines otherwise, be applied in determining whether the above targets are met. In addition, options shall only become exercisable in respect of any shares if the Committee in its absolute discretion determines that the overall financial performance of Xaar plc over the performance period is satisfactory.
(4) From 2017, revenue growth over the period, whereby 25% of the Awards will vest if the threshold target is achieved, below threshold 0% will vest and up to a maximum of 100% if the maximum revenue growth target or higher is achieved.

There are also a number of LTIP share awards granted that are subject to the achievement of different performance conditions for specific individuals, dependent on revenue or profit performance over a set performance period.

In addition, options shall only become exercisable in respect of any shares if the Committee in its absolute discretion determines that the overall financial performance of Xaar plc over the performance period is satisfactory. All awards that will vest will be calculated on a straight-line basis. All awards made under this scheme are exercisable within three to ten years after the date of grant. Save as permitted in the Long Term Incentive Plan rules, awards lapse on an employee leaving the Group.

Notes to the consolidated financial statements continued for the year ended 31 December 2017

32. Share-based payments continued

Long Term Incentive Plan continued

Key individuals have previously been invited to participate in a bonus matching scheme where matching LTIP share awards are granted when the employee invests their bonus in Xaar shares and retains ownership of these shares for the duration of the LTIP share award vesting period. The matching share award is a 1 for 1 match on the pre-tax value of the bonus used to acquire bonus investment shares. Matching LTIP share awards are subject to the same performance criteria as all other LTIP awards.

Details of performance share awards outstanding during the year are as follows:

	2017	2016
Awards outstanding at start of year	**1,731,001**	1,543,345
Granted during the year	**770,091**	684,395
Lapsed during the year	**(432,023)**	(479,574)
Exercised during the year	**(76,124)**	(17,165)
Awards outstanding at end of year	**1,992,945**	1,731,001
Exercisable at the end of the year	**148,097**	223,758

The weighted average share price at the date of exercise for awards exercised during the period was £3.65 (2016: £4.37). The options outstanding at 31 December 2017 had a weighted average remaining contractual life of eight years (2016: eight years). In 2017, Performance Share Awards were made on 16 May. The aggregate of the estimated fair values of grants made on those dates is £2.8 million. In 2016, Performance Share Awards were made on 1 April, 11 May, 27 June, 25 August, 6 September and 1 December. The aggregate of the estimated fair values of grants made on those dates is £3.2 million.

The estimated fair values for grants with non-market based performance conditions were calculated using the Black-Scholes model. The inputs into the Black-Scholes model were as follows:

	2017	2016
Weighted average share price	**£3.75**	£4.82
Weighted average exercise price	**£nil**	£nil
Weighted average expected volatility	**50%**	53%
Weighted average expected life	**6 years**	7 years
Weighted average risk free rate	**0.48%**	0.99%
Weighted average expected dividends	**0.67%**	0.50%

The estimated fair values for grants with market based performance conditions were calculated using the Monte Carlo model. The inputs into the Monte Carlo model were as follows:

	2017	2016
Weighted average share price	**£3.75**	£4.87
Weighted average exercise price	**£nil**	£nil
Weighted average expected volatility	**42%**	57%
Weighted average expected life	**3 years**	3 years
Weighted average risk free rate	**0.12%**	0.43%
Weighted average expected dividends	**2.66%**	1.94%

The Group recognised total expenses of £2,747,000 and £885,000 related to all equity-settled share-based payment transactions in 2017 and 2016 respectively.

33. Retirement benefit schemes

Defined contribution schemes

The UK-based employees of the Group's UK companies have the option to be members of a defined contribution pension scheme managed by a third party pension provider. For each employee who is a member of the scheme the Company will contribute a fixed percentage of each employee's salary to the scheme. The only obligation of the Group with respect to this scheme is to make the specified contributions.

The total cost charged to the income statement in respect of these schemes during 2017 was £1,216,000 (2016: £1,357,000). As at 31 December 2017 contributions of £128,000 (2016: £147,000) due in respect of the current reporting period had not been paid over to the schemes.

34. Related party transactions

Transactions between the Company and its subsidiaries, which are related parties, have been eliminated on consolidation and are not disclosed in this note.

Remuneration of key management personnel

The remuneration of the Directors, who are the key management personnel of the Group, is set out below in aggregate for each of the categories specified in IAS 24 Related Party Disclosures. Further information about the remuneration of individual Directors is provided in the audited part of the Directors' Remuneration report on page 60.

	2017 £'000	2016 £'000
Short term employee benefits	**1,195**	1,180
Post-employment benefits	**76**	74
Share-based payments	**597**	(131)
	1,868	1,123