

CABINET	AGENDA ITEM No. 6(c)
10 JULY 2012	PUBLIC REPORT

Cabinet Member(s) responsible:	Cllr Marco Cereste – Cabinet Member for Growth, Strategic Planning, Economic Development, Business Engagement and Environmental Capital	
Contact Officer(s):	John Harrison – Executive Director - Strategic Resources	Tel. 452520

DEVELOPMENT OF GROUND MOUNTED SOLAR PHOTOVOLTAIC (PV) PANELS (SOLAR FARMS) AND WIND TURBINES

R E C O M M E N D A T I O N S	
FROM: DIRECTORS	DEADLINE DATE: N/A
That Cabinet:	
<ol style="list-style-type: none"> 1. Approves the outline strategy for the development of renewable energy parks at the three council owned agricultural sites identified in para 4.11.1 of this report, to include Ground Mounted Solar PV (solar farms), wind turbines or other types of renewable energy schemes; 2. Notes that the delivery of the outline strategy for the above sites is subject to further due diligence and studies around planning, environmental, technical and financial issues 3. Delegates authority to the Executive Director – Strategic Resources in consultation with the Leader of the Council and/or Cabinet Member for Resources to: <ol style="list-style-type: none"> (i) identify further sites for development in the vicinity of the three sites set out in para 4.11.1, and carry out appropriate project appraisal studies in relation to them, and if not already in Council ownership to negotiate the acquisition of those sites or interests in them, (subject to further decisions of cabinet or the relevant cabinet member to approve such acquisitions before any commitment is made, as set out in recommendation 4 below); (ii) to award contracts in respect of all sites identified as suitable for renewable energy projects for project appraisal studies and associated professional support; (iii) to extend the current contract with AECOM for project appraisal studies and other preparatory work, if required, (see para 4.7), as the current financial limit is unlikely to be sufficient to carry out all work preparatory to development on multiple sites; 4. Notes that subject to the outcome of the necessary studies and negotiations a further report will be brought back to Cabinet prior to submitting any planning applications and conclusion of negotiations: 5. Approves the use of the Invest to Save budget to deliver the strategy, as outlined in para 4.21, including the need to ensure updates are included in the next refresh of the MTFs as necessary 	

1. ORIGIN OF REPORT

1.1 This report is submitted to Cabinet following a referral from Directors.

2. PURPOSE AND REASON FOR REPORT

2.1 The purpose of this report is to seek Cabinet approval for the development and delivery of ground mounted solar photovoltaic (PV) panels, known as solar farms, wind turbines and other types of renewable energy schemes on sites within the Peterborough area.

2.2 This report is for Cabinet to consider under its Terms of Reference No. 3.2.4, to promote the Council's corporate and key strategies and Peterborough's Community Strategy and approve strategies and cross-cutting programmes not included within the Council's Major Policy Framework.

3. TIMESCALE

Is this a Major Policy Item/Statutory Plan?	NO	If Yes, date for relevant Cabinet Meeting	n/a
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4. BACKGROUND INFORMATION

4.1 The Council, as part of its Environmental Capital Agenda, is seeking to produce 'green energy' in the city through its Energy Services Company ('ESCO'), "Blue Sky Peterborough Limited". Progress has already been made in supplying and installing solar photovoltaic (PV) panels on rooftops of some of the council's buildings and schools. The current Feed in Tariff support regime by the Department of Energy and Climate Change (DECC) for such schemes has been reduced significantly over recent months to a point that the build out of further PV panels on roofs is not currently profitable. As such these schemes currently do not meet the Invest to Save Budget criteria. This position will be kept under review.

4.2 The ESCO will also seek to support and enhance major regeneration schemes in the city such as Fletton Quays, helping the energy for these developments be delivered in a sustainable manner.

4.3 To make a significant inroad into the generation of renewable energy the council must now strategically focus on the delivery of large scale generation projects, in particular, off site wind and ground mounted solar projects. These projects may also be enhanced where possible by their integration with other renewable technologies such as anaerobic digestion facilities.

4.4 These projects will not only generate significant amounts of renewable energy that can be used by the council and safeguard our budgets against rising and uncertain energy price exposure, but can also be used for:

- Schools
- Dwellings
- Businesses
- Sold elsewhere to generate income

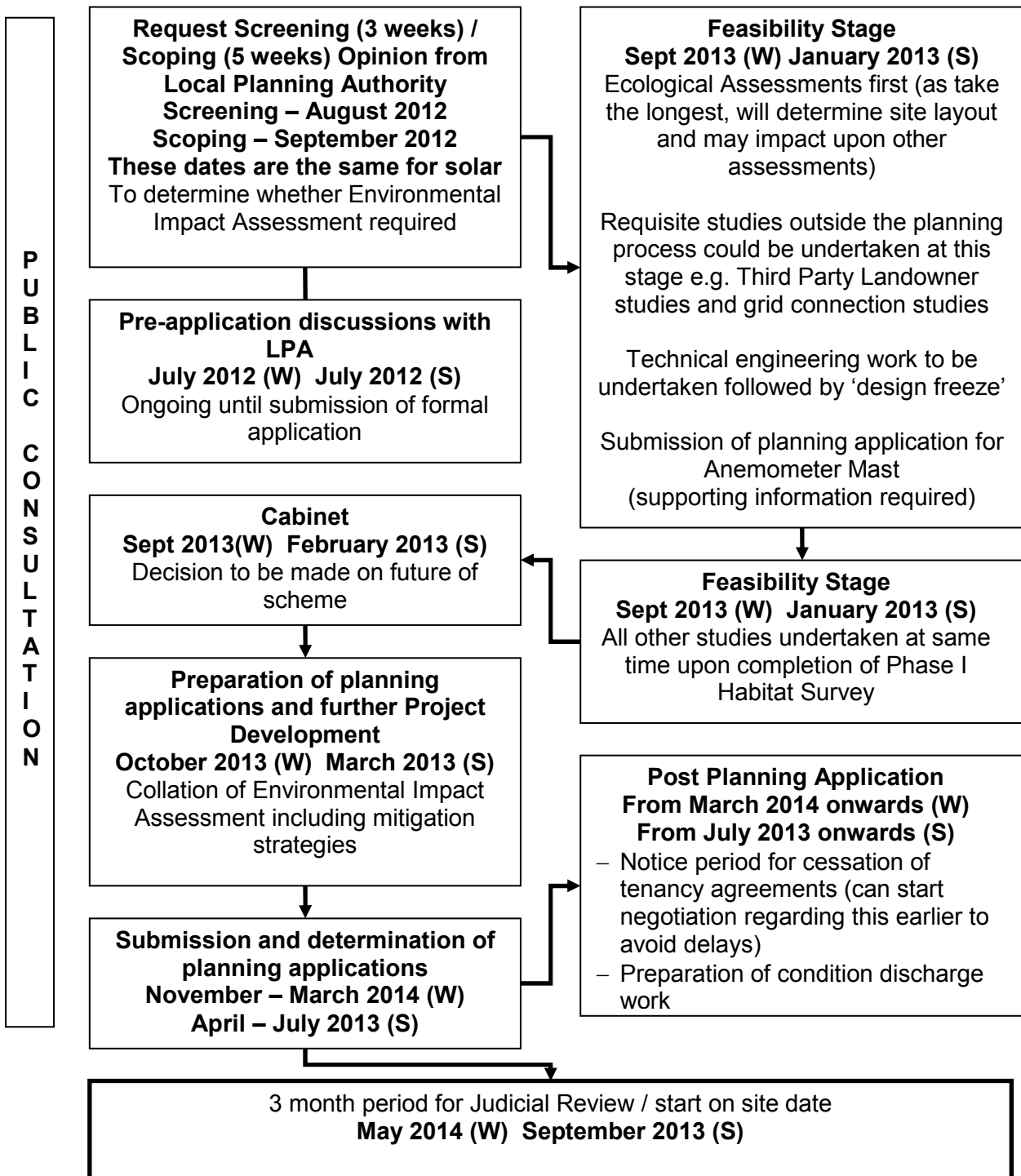
4.5 The proposals in the report aim to deliver significant wind and ground mounted schemes in support of the above objective. The proposed developments will be truly sustainable, so that they maximise energy input as well as balancing environmental and community concerns.

- 4.6 The Council's current carbon footprint from energy is approximately 22,000 tonnes of CO₂. Depending upon which option is selected, these developments, once operational, could result in up to 57,000 tonnes of CO₂ being saved
- 4.7 To enable consideration of whether there were any suitable sites in the Peterborough area for development of renewable energy projects, the Executive Director – Strategic Resources, under his delegated authority, awarded a contract using the Homes and Communities Agency (HCA) framework procurement process, to AECOM, to carry out initial feasibility studies.
- 4.8 The contract to AECOM covers the initial studies already carried out, and additional technical engineering and design work, assessment of infrastructure costs, ensuring compliance with all relevant legislation and ensuring all necessary consents are in place, such as receiving a formal grid connection offer, and dealing with any landownership issues. The terms of the agreement permit only the provision of services required to prepare sites for construction; any construction required would need to be the subject of a separate contract, to be authorised by a further Cabinet or Cabinet member decision at the appropriate time. The current contract with AECOM is limited to a financial value of £500,000 which is likely to be insufficient to carry out all preparatory work on multiple sites, and if it is likely that the contract will need to be extended, for which authority is sought in recommendation 2(iii) of this report.
- 4.9 Working with AECOM, the Council has been able to identify a number of sites in its ownership, where development of renewable energy projects including ground mounted solar PV panels and wind turbines seems feasible.
- 4.10 The Council has also awarded a framework contract in January 2012 with Mears for the delivery of ground mounted PV. This is the contract that is currently building roof mounted panels across a range of schools in the city.

Studies carried out to date

- 4.11 Prior to seeking Cabinet's approval for these approvals, only those studies that were necessary to establish initial feasibility have been carried out. Some detail is in the paragraphs below:
- 4.11.1 High level desktop studies have been carried out in relation to the identified sites to show approximate site coverage of ground Mounted Solar PV. These studies represent a simple quantification of the potential for solar on the areas available, they are indicative and do not represent a design. **Appendix 1 contains a list of the three sites which are:**
1. **America Farm**
 2. **Morris Fen**
 3. **Newborough Farm**
- Appendix 2** shows the approximate output in Mega watts (MW) for each site, and **Appendix 3** shows the potential PV coverage for each site.
- 4.11.2 Preliminary feasibility has been undertaken for the provision of wind turbines at both Newborough Farm and Morris Fen. A Pre-screening Wind Report produced by AECOM indicates that Newborough Farm has the potential for up to 14 x 2 Mega Watt (MW) wind turbines, and that Morris Fen has the capacity for 2 x 2 MW wind turbines. **Appendix 3** also shows site plans for the two wind sites with the indicative location and number of wind turbines within each site. This work has also included an initial assessment of site constraints and identified some of the studies that would be required going forward. It must be stressed that this is an initial assessment. Final detailed studies will need to be undertaken before the sites could be brought forward for consideration by Planning Committee.

- 4.11.3 In all cases, the details could change as the schemes are taken through full project appraisal and the planning process.
- 4.11.4 A limited amount of work has been carried out looking into the tenancy agreements in place. All sites are currently farmed and subject to a number of Agricultural Tenancy Agreements. The agreements have provisions in place for the landlord to take back land that is required for non-agricultural use subject to the payment of compensation. The Council would need to give notice to end the tenancy by giving not less than 1-year notice and could only do so once planning permission is in place. The amount of land that would be taken up by the developments could leave substantial areas for farming to continue. There is also the potential to offer additional land to affected tenants in some circumstances.
- 4.11.5 The Council has made a preliminary assessment of the studies that are likely to be required to support the planning applications. The studies required are listed below and **the timescales** are included on the flow chart in para 4.15:
- Ecological Assessments (1 year, worst case scenario 2 years for bird surveys)
 - Flood Risk Assessments
 - Landscape and Visual Impact Assessment (Winter only, Nov-Mar)
 - Assessment of the impact on minerals and waste deposits
 - Tree and Arboricultural Assessments
 - Cultural Heritage and Archaeological Assessments
 - Traffic Studies
 - Noise Assessments
 - Telecommunications and Aviation Assessments
 - Shadow Flicker Assessments
- 4.11.6 A number of other studies will be required that fall outside of the planning process, such as the design engineering work to undertaken.
- 4.12 The flow chart below sets out the key stages that need to be undertaken in order to complete the preparatory work and get the sites ready for development. The sequence is broadly the same for each development option, although the ecological assessments would be less onerous for the solar only (option 2) than the options that include wind turbines.
- 4.13 All 3 sites could potentially be ready for construction for Ground Mounted Solar PV within 1 year (subject to any challenge by judicial review). It is expected that 3 separate planning applications would be submitted, one for each site.
- 4.14 It is anticipated that 2 planning applications for the wind turbines at Newborough Farm and Morris Fen would be submitted once the ecological surveys have been completed and the project development and planning application preparation work has been concluded. The wind turbine planning applications could therefore be submitted to the Local Planning Authority for determination within 18 months and working start on site in around May 2014, leaving three months post-planning permission in case of a Judicial Review application. That timescale is subject to bird surveys only being undertaken over 1 year.
- 4.15 It is important to note that the studies required for both Options 2 and 3, as set out below, would all need to be undertaken from the outset, and broadly in the sequence set out in the flow chart in order to meet the above timescales. For example, the ecological studies should be sufficient to cover all 3 solar planning applications and the 2 wind turbine applications. In the flowchart, timescales for wind are noted with a 'W' and solar with an 'S'.



An initial assessment of grid capacity has been carried out by AECOM for the locations, assessing the viability of grid connections for the proposed developments

4.16 Fundamentally there is no issue with grid connections in that there is sufficient capacity in and around Peterborough to be able to take the power generated from the plants. It is not yet possible to estimate pricing for individual site connection strategies as it is not possible at this stage to determine the prices that the relevant DNO (District network Operator) will quote. However, there should be sufficient contingency in the prices used in the financial modelling of the total capital expenditure for each site to cover these costs. Any uplift in

price arising from technical, programme and / or geological issues, should not materially affect the commercial viability of each plant.

4.17 With regards specific locations and proposed connection points, these are detailed below:

OPTION 1: Proposed Plant Type and Capacity	Proposed Grid Connection Location	DNO
America Farm; 16MW Solar Farm	Peterborough East Substation; 11kV	UKPN
Morris Fen, 4MW Wind Farm	Peterborough East Substation; 11kV*	UKPN
Newborough Farm, 28MW Wind Farm	Crowland Substation; 33kV*	WPD

* It should be noted that an alternative strategy proposed for the wind farms, given their proximity to each other is that both Morris Fen and Newborough sites could connect to the Crowland Substation.

OPTION 2: Proposed Plant Type and Capacity	Proposed Grid Connection Location	DNO
America Farm; 16MW Solar Farm	Peterborough East Substation; 11kV	UKPN
Morris Fen, 40MW Solar Farm	Crowland Substation; 132kV**	WPD
Newborough Farm, 50MW Wind Farm	Crowland Substation; 132kV**	WPD

** It should be noted that this option represents the most significant grid connection works and in order to export this amount of power, the alternative strategy proposed above is mandatory. It will also require further consultation with the DNO for the viability.

Proposed Plant Type and Capacity	Proposed Grid Connection Location	DNO
America Farm; 16MW Solar Farm	Peterborough East Substation; 11kV	UKPN
Morris Fen, 4MW Wind Farm + 15MW Solar Farm	Crowland Substation; 132kV***	WPD
Newborough Farm, 28MW Wind Farm + 15MW Solar Farm	Crowland Substation; 132kV***	WPD

***It should be noted that this represents the maximum viable output using the alternative strategy as outlined above.

Financial Modelling Overview

4.18 There are **three** options currently being considered which comprise a combination of generating plant as follows.

Option 1 considers generating energy from the proposed sites as follows:

- Solar Farm on America Farm; 16MW
- Wind Farm on Newborough; 28MW
- Wind Farm on Morris Fen; 4MW

Option 2 considers generating energy from solar PV panels only as follows:

- Solar Farm on America Farm; 16MW
- Solar Farm on Newborough; 50MW
- Solar Farm on Morris Fen; 40 MW

Option 3 considers generating energy from the proposed sites as follows:

- Solar Farm on America Farm; 16MW
- Wind Farm on Newborough; 28MW + 15MW Solar Farm
- Wind Farm on Morris Fen; 4MW + 15MW Solar Farm

Initial financial modelling has been undertaken by Davis Langdon and Deloitte on each of the generation plant. The indicative financial summary of each of the options is set out below, with further information set out in Appendix 2

	Option 1 £m	Option 2 £m	Option 3 £m
Total project costs and income			
Capital repayment	92.9	198.6	127.0
Operating Costs	54.7	131.0	90.2
Interest	50.8	121.7	71.7
Total costs	198.4	451.3	288.9
Income – ROC	98.9	206.5	159.0
Income – PPA	189.3	266.7	266.8
Total Income	288.2	473.2	425.8
Net Income	89.8	21.9	136.9
Net position in first 5 years (+ denotes net surplus)			
2012/13	-0.1	-0.1	-0.1
2013/14	-0.1	1.4	-0.1
2014/15	3.1	2.0	3.5
2015/16	3.5	3.0	5.9
2016/17	4.0	4.4	8.3
Potential CO2 displaced Tonnes / annum	45,613	41,000	57,280

4.19 Further work needs to be carried out to refine the financial modelling as the options develop. This work will include the following:

- Refinement of costs and income in line with relevant assessments and studies (including those outlined in para 4.11.5 above)
- The financial models currently include an estimate for the cost of business rates. Under Government proposals to localise business rates, some of the rates costs will be retained by the Council. This would further improve the return to the Council. The cost of business rates included ranges from £450k-£550k in the first year of operation
- The impact on farm income from the proposals (per issues outlined in para 4.11.4 above)
- Review of phasing of capital spend in line with expected project delivery
- Without further detailed design, the potential solar PV installation size cannot be determined due to differing space constraints. It is assumed that a further 15MW of solar installation should be possible pending review of grid capacity and land availability on the wind farm locations. This, and the financial implications, will be tested further

4.20 The Council's capital programme includes £100m to support Invest to Save schemes. This budget can be used to fund any projects will deliver savings to the Council, and has to date been used for schemes including the roll out of PV panels in schools.

4.21 It is envisaged that this Invest to Save approach will be used to fund the capital investment of the preferred renewable energy site option, including the necessary preparatory work outlined in this report. As outlined above each option delivers savings over and above the costs of the capital financing. The following table shows how this project meets the criteria for Invest to Save funding:

Principles outlining how Invest to Save Budget should be spent:	Does this project meet the principles?
Each project would need to complete the Council's standard full business case. This would include the required officer evaluation and approval as for all business cases	Outline business case included in this Cabinet report. Business case for preferred option to be finalise once studies complete.
Schemes should deliver savings that improve the financial position of the Council presented in this MTFS	This scheme is set to make a surplus over and above the costs of the capital financing. A summary is provided above with further detail in Appendix 2 on each site.
Schemes will be also be considered that maintain the MTFS position (i.e. neither improve or worsen the position), but that contribute towards delivering service improvements or towards achievement of Council priorities	Not directly relevant as a surplus is generated, but the projects will contribute towards the Council's status of the Home of Environment Capital and the Sustainable Community Strategy.
The MTFS assumes that payback from schemes starts in the same year that the project starts. If this is not the case, proposals will need the following additional analysis in the business case: <ul style="list-style-type: none"> • A full net present value analysis • An outline of how the finances will be covered across financial years if schemes are not cost neutral within each financial year 	The payback varies in accordance with whether the sites include wind or solar with wind having more favourable payback periods compared to solar. There is payback in year 1 on both options which will be held back to balance the cashflow in the following years.

Proposals will need to be subject to the Council's decision making requirements e.g. any schemes above £500k will be subject to a Cabinet Member Decision Notice approved by the Cabinet Member for Resources and the relevant portfolio holder	To develop wind farms, the Council will need to procure a contractor to install and maintain the wind farms, and authority to award any such contract will be sought in a subsequent report to cabinet, or cabinet member decision notice.
An update on schemes should be included in future financial reports to Cabinet during the year	Future reports will be provided to Cabinet as part of the normal budgetary control reports

It is recognised that at this stage, costs of some options exceed the current level of Invest to Save funding approved by Council for the 2012-13 financial year. Given the likely timescales for studies outlined in para 4.15 above, it will be possible to review the appropriate level of provision in the next refresh of the MTFs.

- 4.22 The principal reason for exploring more than one option is to build in flexibility to the project should one of the options not be feasible. For example Option 2 sets out the development of solar farms only and excludes wind turbines. This is partly because of the higher risks usually associated with gaining planning permission for wind turbines.

Next Steps

- 4.23 If Cabinet approves these recommendations, the next key stage will be to undertake full project appraisal studies in order to establish the suitability of the sites for development. This stage will identify any issues that will prevent development and look in detail at all of the sites' constraints. Resolving the issue of connection to the grid is one of the first steps that will be undertaken. The work will also assess both the technical engineering aspects of the development, as well as the planning constraints.
- 4.24 Following the completion of the next Stage and subject to there being no issues, further project development and the preparation of the planning applications would then need to be undertaken.
- 4.25 The implications around taxation will be further evaluated to ensure that income from energy is dealt with in the most tax efficient manner and in the best interests of the Council.
- 4.26 It will be necessary to carry out extensive public consultation, including meeting with Parish Councils and other interested groups. A comprehensive consultation exercise will be undertaken. Much of this work will take place at the pre-planning stage, and a clear strategy for communicating with the public, stakeholders, and members will be established.
- 4.27 As with any development of renewable energy projects, at this early stage of the proposals, there are risks that need to be addressed. There can be no guarantee that the Council will be able to proceed as anticipated on any of the sites.

Some of the main areas of risk are:

- 4.27.1 Obtaining Planning permission: even if studies conclude that the sites are suitable for development, there is a risk that planning permission may not be forthcoming either at all, or to the extent necessary for viability. There is also a risk around the extent of possible public/political opposition to the schemes and the threat of judicial review should planning permission be granted for the sites.
- 4.27.2 Eligible renewable generators receive Renewable Obligation Certificates (ROCs) for each MWh of electricity generated. The price used is based on the estimated buy out price set

by OFGEM each year. There is risk around the rate used in the financial models although previous years' trends show that this rate is achievable. The ROC scheme is also reliant on the support of the Government and is subject to any changes they may impose through further reviews of the scheme.

- 4.27.3 In relation to possible risks around grid connections, there are three main risks. The first is in relation to the costs required to make connections to the grid. The Grid Viability Study completed does not detail pricing for individual site connections, although it is not thought this would be cost prohibitive. Secondly, given the number of renewable energy projects in the area that have planning permission but are still to be constructed, there may be the need to increase the capacity of the network in the area. Should this be the case, opportunities to work with other investors in order to generate cost savings to the Council will be explored. There will also be the need to obtain 3rd party landowners consent to make the connections to the grid which may not be forthcoming.
- 4.27.4 The Government may change any of its current the subsidy arrangements either through cost or period of time for subsidy. These can only be guaranteed at the time the individual schemes are built out and accredited by OFGEM.
- 4.27.5 The overall costs and incomes surrounding the project may vary. An initial sensitivity analysis has been undertaken which would indicate that at this stage all relevant factors in the calculation appear reasonable.

5. REASONS FOR RECOMMENDATION

- 5.1 To enable the Council to progress its "green" agenda by developing renewable energy technologies, thus generating income through sale of energy, reducing energy costs, and reducing CO2 emissions.

6. CONSULTATION

- 6.1 The Executive Director – Strategic Resources, has consulted with the Leader, Cabinet Advisor and Cabinet Member for Resources in bringing forward these proposals. To date, the potential development of the sites for wind and solar has remained confidential for reasons of commercial sensitivity and no consultation with outside bodies or the general public has been undertaken. It is anticipated that an early and comprehensive public consultation exercise will be undertaken following this Cabinet decision, as set out in para 4.26 above, by AECOM in conjunction with the Council's Communications Team. Prior to the publication of this cabinet report, all tenants of the affected land have been informed in writing of the contents of the report, and advised that they will be fully consulted, to avoid them learning of these proposals other than from the council.

7. IMPLICATIONS

- 7.1 **Financial:** Financial implications are outlined in paras 4.18 to 4.22 above, with further detail set out in appendix 2 to this report
- 7.2 Legal implications are discussed in the body of the report as necessary, and all additional legal implications of completing the developments as proposed will be considered when the delegated decisions requested in this report are made. All decisions will be made in accordance with legislation and regulations prevailing at the time that decisions are made.
- 7.3 **Corporate Priorities:** this proposal supports the Council in its aspiration to become home of Environment Capital.

- 7.4 **Property:** as set out in para 4.11.4 above, the potential sites are currently subject to tenancy agreements. It will be necessary to deal with issues arising from tenancy agreements once firmer proposals are in place for each of the sites (after further studies). Depending on the options chosen, it may be possible to continue farming from the sites. In addition, permission from third party landowners may need to be sought in order to transport equipment to the site and to make connection to the grid via underground or overhead power lines. This work will be undertaken by AECOM early in the development programme in order to minimise risk.
- 7.5.1 **Planning:** once studies are completed, if the sites are shown to be suitable for the proposed developments, applications for planning permission will need to be made. There is no guarantee that permissions will be forthcoming, and if they are not this is turn would have a knock on impact on the financial profile of the projects. To minimise this risk there will be early engagement with the Planning Authority.
- 7.5.2 **Procurement:** It will be necessary to extend existing contractual arrangements for professional support such as legal, technical, environmental and financial support as set out in the recommendations.

8. ALTERNATIVE OPTIONS CONSIDERED AND IMPLICATIONS

- 8.1 The Council could decide not to proceed with the studies and potential development of the identified sites. If it chooses to do so, it loses a valuable opportunity to progress its development of green energy. At this stage, no credible alternative sites to those proposed have emerged.

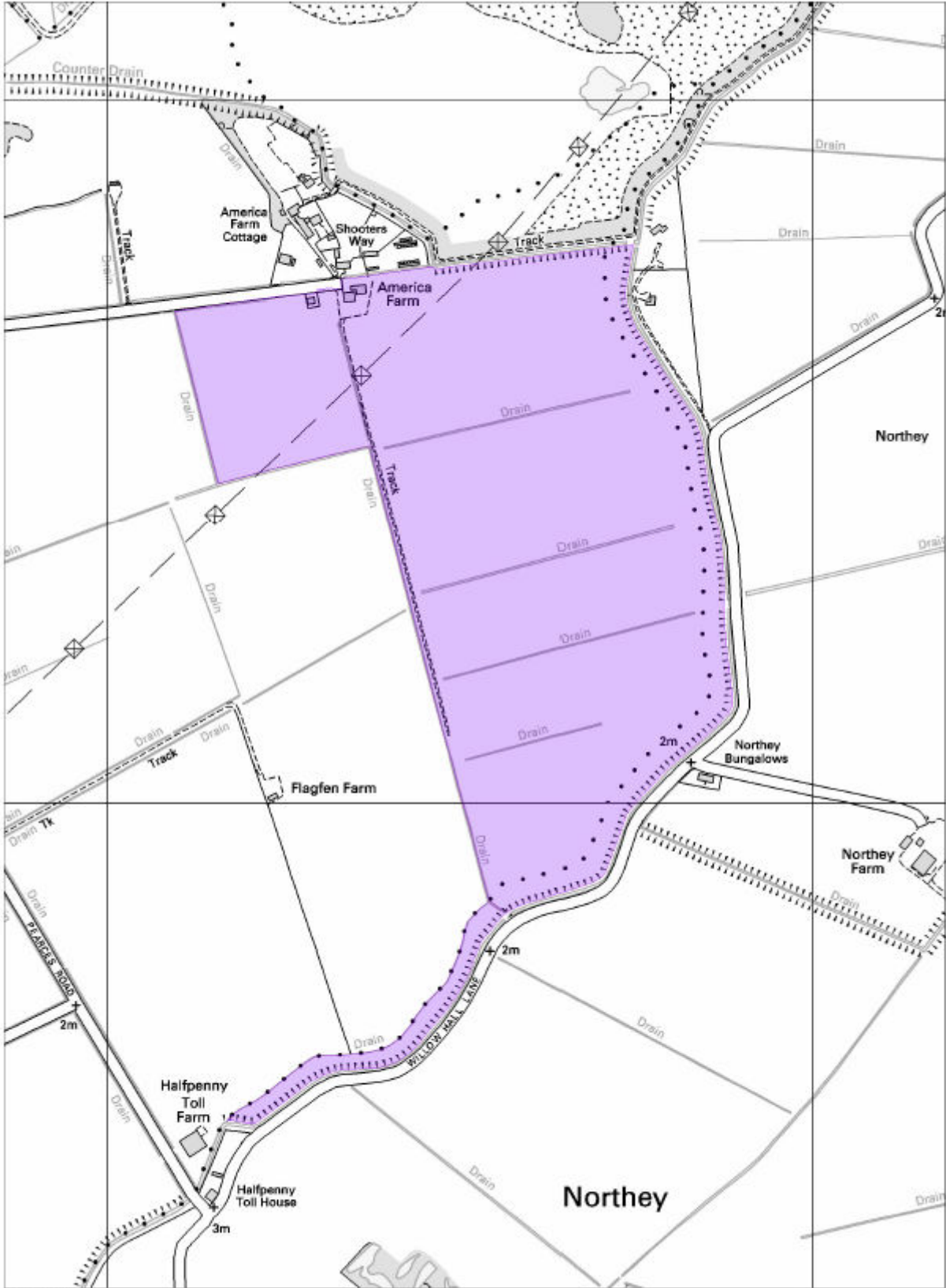
9. BACKGROUND DOCUMENTS

Peterborough Development Plan Documents (Local Plan) – Peterborough Core Strategy DPD Adopted February 2011 and Peterborough Site Allocations DPD Adopted April 2012

Cambridgeshire and Peterborough Minerals and Waste Core Strategy DPD – Adopted July 2011

Cambridgeshire and Peterborough Minerals and Waste Site Specific Proposals – Adopted February 2012

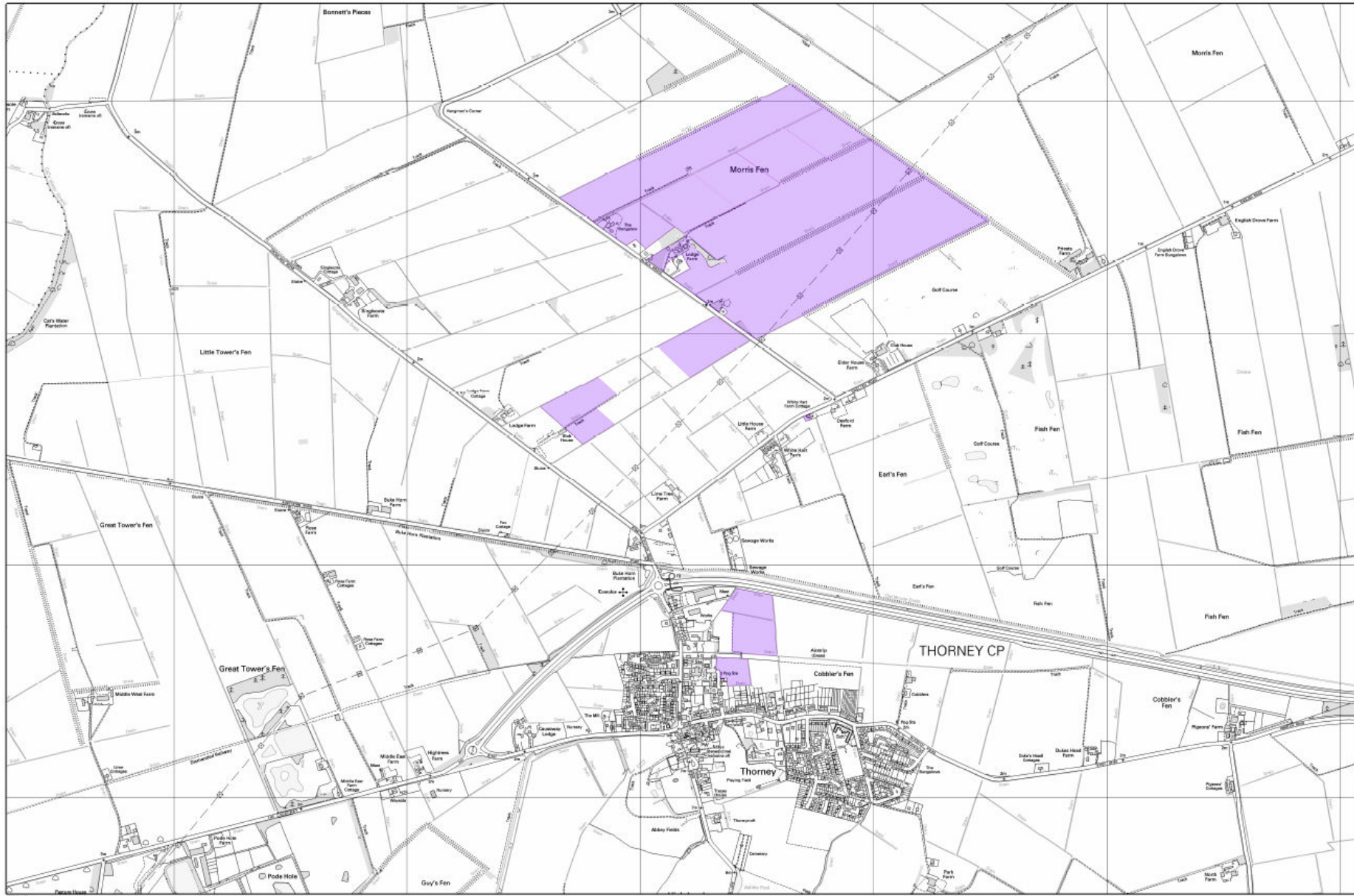
America Farm



Title America Farm
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 Department Shared Transactional Services - Asset Management Date 26th September 2011 Name HH
 PCC GIS PETERBOROUGH CITY COUNCIL

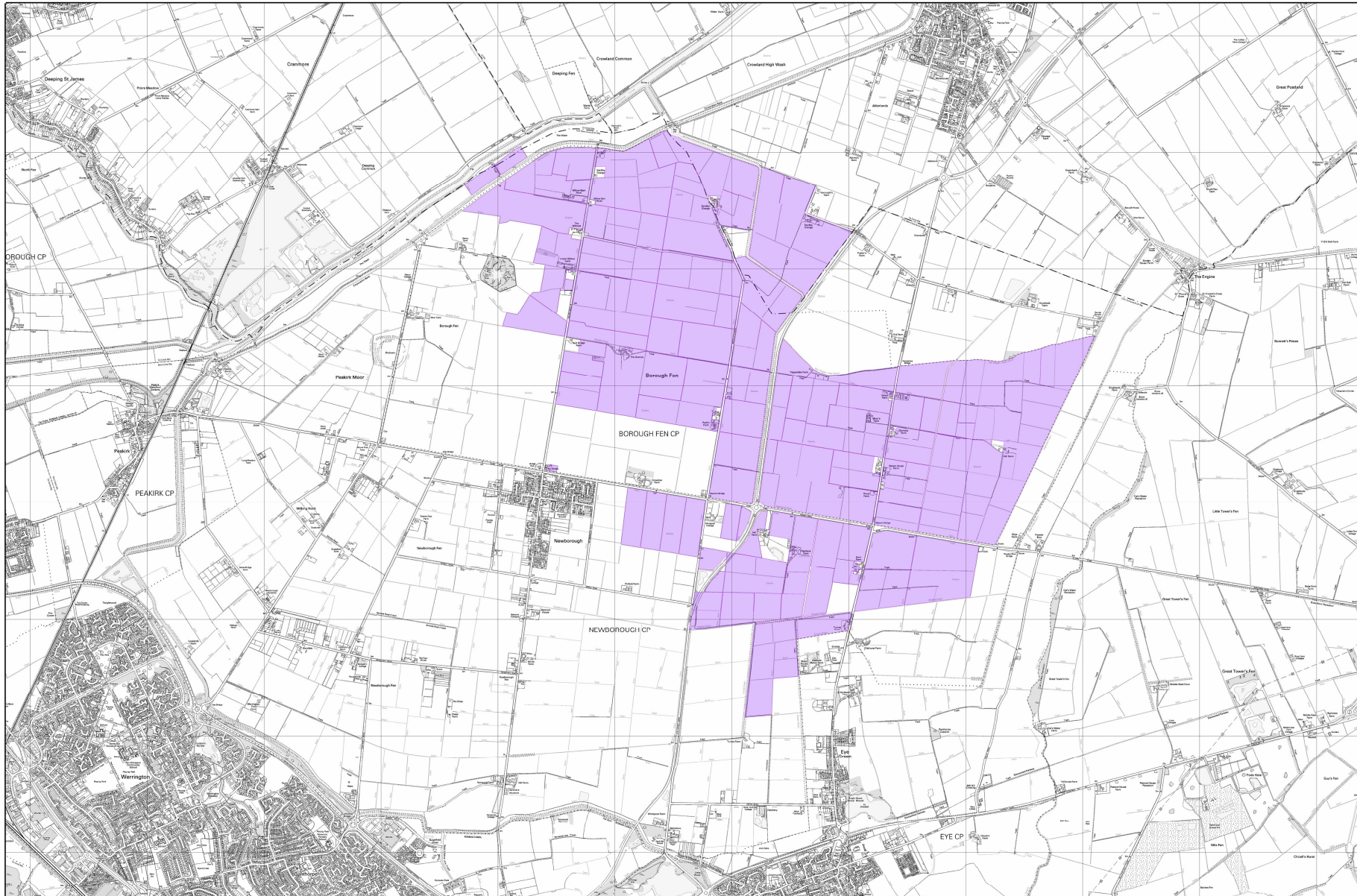
Morris Fen

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Newborough Farm

98



Title Newborough Farms

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Drg. No.

Department Shared Transactional Services - Asset Management

Date

26th September 2011

Name HH

PCC GIS



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Financial Models**OPTION 1**

Note – all numbers are based on a “base case” model which utilises current benchmark data from similar projects. A full sensitivity analysis has been conducted to understand the envelope of viability according to key dimensions changing in the forecast timeframe for development. The costs include a sum of £475k for the grid connection for both wind farms. This sum is purely indicative but allows for a nominal upgrade to the substation (£100k) and 3km buried connection (£375k). It is believed that there is sufficient contingency built into the model that should not result in any significant uplift. However, the figures could still be subject to revision.

The following is a summary of the net income position over a period of the asset life (20 years for Wind, 25 years for Solar), including 20 years for the ROC incentive for Option 1.

OPTION 1	Americas Farm Solar	Newborough Farm Wind	Morris Fen Wind	Total
MW Installed	16	28	4	48
	£m	£m	£m	£m
Capital repayment	29.4	54.0	9.5	92.9
Operating Costs	19.6	30.5	4.6	54.7
Interest	18.3	27.7	4.8	50.8
Total Expenditure	67.2	112.2	18.9	198.4
				-
Income - ROC	30.9	59.5	8.5	98.9
Income - PPA	40.0	130.7	18.7	189.3
Total Income	70.9	190.2	27.2	288.2
Net Income	3.7	77.9	8.2	89.8
Net Present Value	2.9	33.2	3.3	39.4

OPTION 2

The following is a summary of the net income position over the 25 year period of the asset life, including 20 years for the ROC incentive for Option 2.

OPTION 2	Americas Farm Solar	Newborough Farm Solar	Morris Fen Solar	Total
MW Installed	16	50	40	106
	£m	£m	£m	£m
Capital repayment	29.4	93.8	75.4	198.7
Operating Costs	19.6	61.9	49.6	131.1
Interest	18.3	57.3	46.1	121.7
Total Expenditure	67.3	213.0	171.1	451.4
				-
Income - ROC	30.9	57.5	78.0	206.5
Income - PPA	40.0	126.0	100.8	266.7
Total Income	70.9	223.5	178.8	473.3
Net Income	3.6	10.5	7.7	21.9
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Net Present Value	2.9	7.9	6.0	16.8

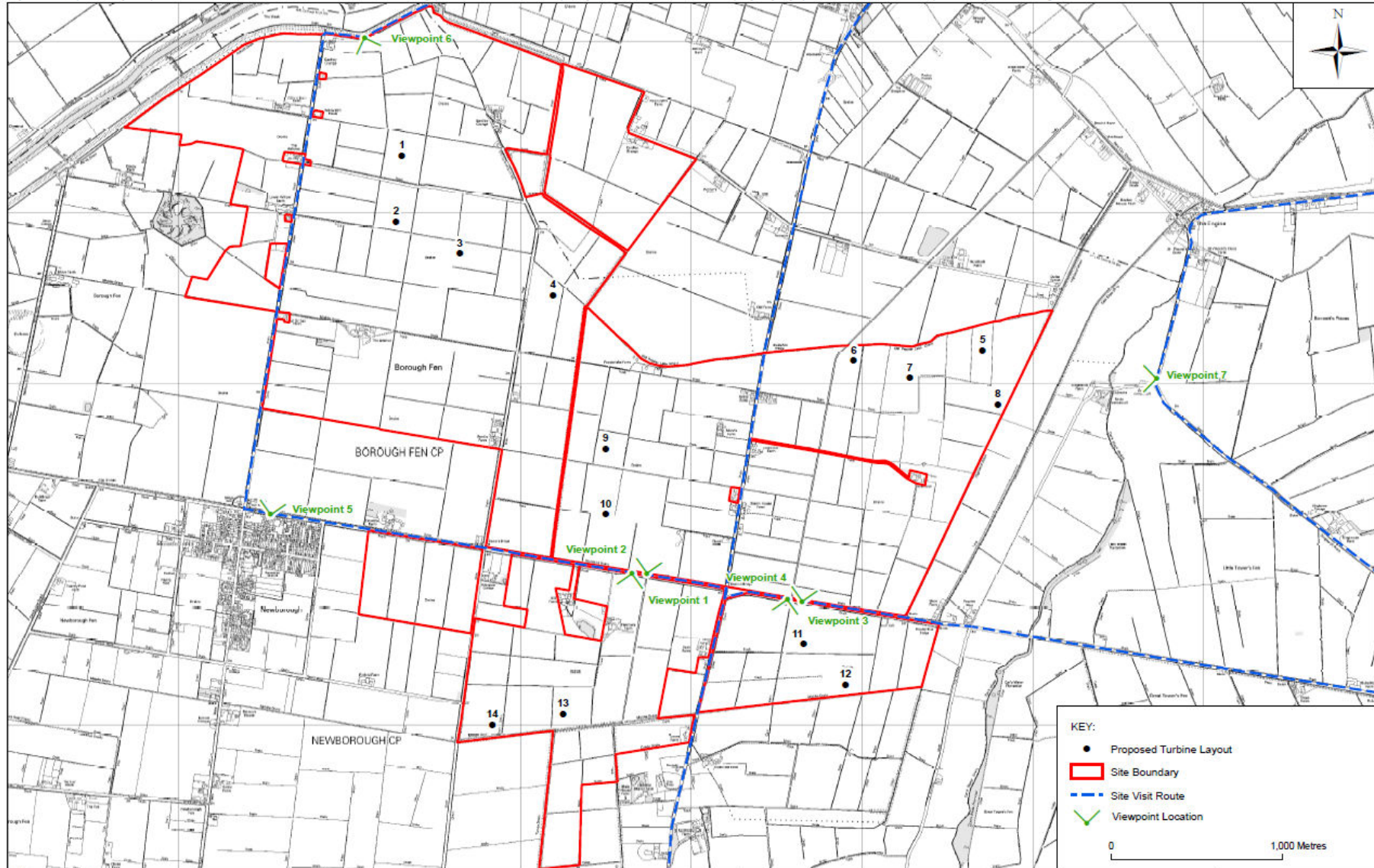
OPTION 3

The following is a summary of the net income position over a period of the asset life (20 years for Wind, 25 years for Solar), including 20 years for the ROC incentive for Option 3.

OPTION 3	Americas Farm Solar	Newborough Farm Wind	Morris Fen Wind	Newborough Farm Solar	Morris Fen Solar	Total
MW Installed	16	28	4	15	15	78
	£m	£m	£m	£m	£m	£m
Capital repayment	29.4	54.1	9.5	17.0	17.0	127.0
Operating Costs	19.6	30.5	4.6	17.8	17.8	90.3
Interest	18.3	27.7	4.8	10.4	10.4	71.7
Total Expenditure	67.3	112.2	18.9	45.2	45.2	288.9
Income - ROC	30.9	59.5	8.5	30.0	30.0	159.0
Income - PPA	40.0	130.7	18.7	38.8	38.8	266.8
Total Income	70.9	190.2	27.2	68.8	68.8	425.8
Net Income	3.7	77.9	8.2	23.5	23.5	136.9
Net Present Value	2.9	33.2	3.3	10.4	10.4	60.3

Newborough Farm – wind turbine locations

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KEY:

- Proposed Turbine Layout
- ▭ Site Boundary
- - - Site Visit Route
- ✓ Viewpoint Location

0 1,000 Metres

Client:  Peterborough
 Project: NEWBOROUGH FARMS - SITE SCREENING

Title: FIGURE 1.2a - SITE VISIT PLAN
 NEWBOROUGH FARMS

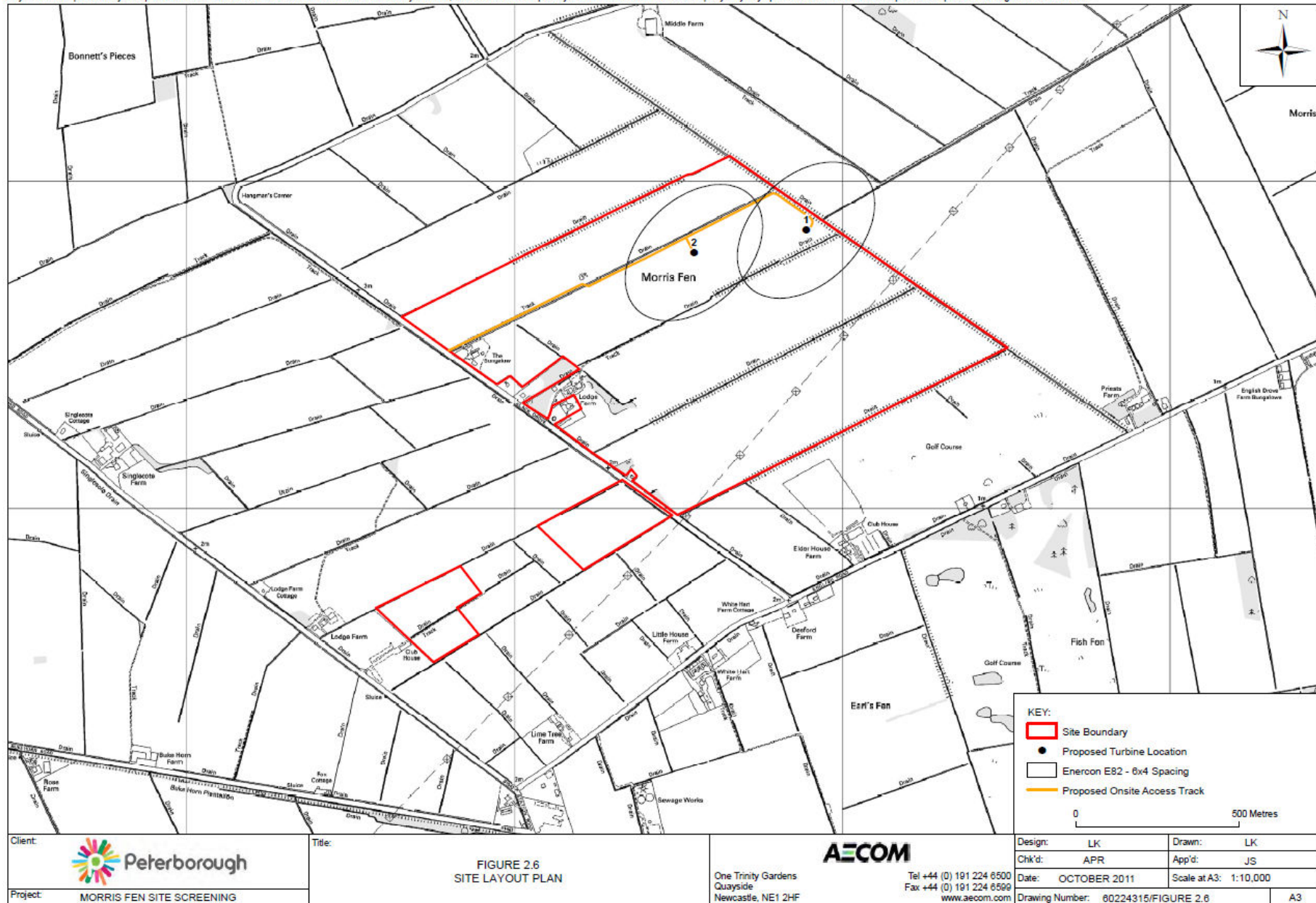
AECOM
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Design: LK	Drawn: LK
Chk'd: APR	App'd: JS
Date: OCTOBER 2011	Scale at A3: 1:20,000
Drawing Number: 80224315 - FIGURE 1.2a	

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Morris Fen – wind turbine locations

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America Farm – Ground Mounted Solar PV coverage



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Newborough Farm – Ground Mounted Solar PV coverage



Morris Fen – Ground Mounted Solar PV coverage

