EXECUTIVE DECISION RECORD SHEET

Name of decision maker:	**Councillor Stephen Holmes**
Portfolio:	**Planning & Regeneration**
Date of Portfolio Holder Decision:	

Title of Decision:
Agreement to enter into a contract with Renewable East for the establishment of renewable energy generation in Maylands

Decision made and reasons:
That the Council agree the funding agreement (annexed) to enable the GAF funding to be allocated against the Capital spend for the delivery of Renewable Energy within Dacorum

Reports considered:

Cabinet report from June 2009

Officers/Councillors/Ward Councillors/Stakeholders Consulted:

Maylands Partnership Maylands Implementation Team IHDB, CRG have all been kept up to date with the development of this project

Monitoring Officer/ Chief Financial Officers Comments:

Monitoring Officer:

Cabinet at its meeting on 30th June 2009 (CA/283/09) agreed "in principle" to approve the preparation of a contract with Renewables East for the establishment of a renewable energy generation centre in Maylands and delegated authority to the Portfolio Holder for Planning and Regeneration in consultation with the Director of Environment and Regeneration, Director of Finance and Corporate Services and Head of Legal Services to conclude the contract. The terms of the Funding Agreement agreed with Renewables East will, when signed, commit the Council to £300,000 cash funding and £25,000 value in kind (i.e. officer time) funding for the project.

The Funding Agreement provides that before any payment is made Renewables East must make an application to the Council for the release of the funding. The application must specify what the funding will be required for (which must be capital spend) and will have to be approved by the Project Steering Group. The application will be reported to the Council's Capital Strategy Steering Group and Cabinet for approval to the release of funding.

S.151 Officer:

This report requests approval to allocate Growth Area fund capital of £300,000 for the delivery of renewable energy in the Maylands Business Park. More specific proposals will be bought back to the Capital Strategy Steering Group and Cabinet for approval prior to the fund being utilised.

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Implications:

Risk: A Risk assessment has been prepared and will be monitored as part of the SPV at each meeting as the project moves forward

Value for Money: Value for Money
ERDF maximising use of DBC funding through delivery of a key Maylands Masterplan project, supported by external funding
Possible return on investment in the long term or through the feed in tariff system which is guaranteed for 25 years

Options Considered and reasons for rejection:

Portfolio Holders Signature:

Date:

Details of any interests declared and any dispensations given by the Standards Committee:

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Date Decision Record Sheet received from portfolio holder: 17/08/2010		
Date Decision Published:	18/08/2010	Decision No: PH/040/10
Date of Expiry of Call-In Period: 25/08/2010		
Date any Call-In received or decision implemented:		

BACKGROUND

1. The Maylands Masterplan (approved by the Council in September 2007) foresees the evolution of Maylands into a 'green' business park, and to this end it advances the creation of a 'green energy centre' to generate power from renewable sources, in addition to the possibility of large- scale energy generation from wind and solar sources.

2. Cabinet first considered a proposal being advanced by Renewables East (RE) to help take this project forward when it considered a report on the 2008/09 GAF expenditure at the meeting on 27 May 2008. Since then, RE has commissioned further study work (involving no monetary cost to the Council, but with a contribution from Hertfordshire CC) to examine the potential for renewable energy facilities at Maylands.

3. Cabinet also considered this project on 17th February 2009 in the context of confirmation of the allocation of GAF funding for year 2 and again in June 2009. The decision from that report being that the Council could enter into a contract to deliver the project subject to agreement of the contract details.

4. For Maylands, the delivery of renewable energy will be the key output. Initial findings by the consultants point to a biomass-fuelled combined heat and power (CHP) plant, possibly supported by a wind farm and solar photovoltaic installation, which may have the potential to make the Maylands Gateway development and parts of the remainder of Maylands, carbon neutral. Key benefits of the project are:

   - A means of taking the regeneration of Maylands forward

   - Providing an economic platform for the development of green-based businesses and jobs through the creation of related supply chains

   - Maylands becoming an exemplar location for green energy production and its development as a green business park

   - An opportunity for DBC to retain an equity stake in any new facility, to be established through the development process

   - The potential ability to power all new development within the Maylands Gateway,the rest of the Business Park could benefit through retro-fitting of renewable energy technology. Opportunities to extend provision of green energy to new development expected through the growth agenda will exist. e.g. East Hemel Hempstead Area Action Plan

   - The leverage of major private sector investment – across the whole of the regional project; this is estimated at 25 million Euros

   - Enhanced security of energy supply

   - A regional saving of 500,000 tonnes of carbon dioxide over 25 years

   - A reduction in the carbon footprint of Dacorum currently one of the highest in Hertfordshire

   - a firm contribution to meeting regional renewable energy targets

   - Assistance to the Council in meeting targets under NI185 -CO2 reduction from Local Authority operations

5. In conclusion, the project represents a major opportunity to put one of the key elements of the Maylands Masterplan into operation. This project will clearly enable the Council to demonstrate commitment to the delivery of the Masterplan and in particular the aspiration to deliver a green business park for the future. This project also clearly demonstrates the Council's ability to work successfully in partnership and to be innovative through investment into projects, which will impact on both regeneration and the impact of climate change into the future.

6. Facilitation of the project will be through a Steering Group or Special Purpose Vehicle. The SPV will research and suggest potential delivery of renewable energy through a range of pilot projects which will be approved in the first instance by the SPV and then through CSSG and on to Cabinet to draw down the GAF funding un to a maximum of £300,000.00. This project is clearly one of high risk by its nature. However it clearly demonstrates the Council as being pro-active, and enabling leading edge projects to be developed.

7. The initial phase of the project will include the Capital purchase of Photovoltaic panels for installation onto the roofs on businesses(who have expressed interest in the scheme) and will generate a profit through the Feed In Tariff which will aim to make the project self-sustaining into the long term.

8. The businesses benefit from low cost renewable energy – guaranteed for 25 years and no cost towards the initial installation.

RENEWABLES EAST

Maylands Green Business Park – Renewable Energy Solutions

LCDI LOW CARBON DEVELOPMENT INITIATIVE

The Opportunity

- Baseline emissions for the Maylands area 30,220 tonnes of CO2 per annum (1/3 new buildings, 2/3 existing buildings)
- 1/3 of emissions arises from fossil fuels for heating, two thirds from use of electricity for lighting, appliances, cooling and process uses.
- Significant opportunities for reducing net emissions to zero through exploiting resources of the area and harnessing the collective ambition of the businesses on the park to remake and re-brand Maylands as a place for leading businesses to locate.

Technologies available

Biomass

Biomass CHP - In its simplest form, a CHP system uses a furnace & boiler to produce steam. This steam then turns the turbine & generator that produces the electricity used on the site. The waste heat and steam is recovered through a heat recovery boiler. This produces the hot water that is fed to the site for use in the central heating and cooling systems.

Biomass Boilers – biomass material is fed into a small furnace & boiler to produce hot water which is piped directly to the buildings it serves.

Heat Pumps

Air Source heat pump - extracts heat from the outside air in the same way that a fridge extracts heat from its inside. It extracts heat from the air even when the outside temperature is as low as -15° C.

Ground Source heat pump - run on electricity that captures the low grade heat from the ground. As with the air source, the heat pumps works much like a fridge in reverse mode to provide both space heating and hot water much more efficiently than conventional systems.

Solar Power

Solar Photovoltaics (PV) – Solar PV is a simple sustainable energy technology, with no moving parts, converting sunlight (photons) into electricity. Each PV cell consists of one or two layers of a semi-conducting material, usually silicon. When light shines on the cell it creates an electric field across the layers, causing electricity to flow.

Solar Thermal - Solar water heating systems gather energy radiated by the sun and convert it into useful energy in the form of hot water. Solar water heating systems work alongside your conventional water heater to provide hot water.

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Wind

Hydro

Wind Power - Wind turbines harness the power of the wind and use it to generate electricity. Small systems known as "microwind" or "small-wind" turbines can produce electricity to help power the lights and electrical appliances in a typical home.

Hydro Power - Hydroelectricity systems generate electricity from running water - usually a small stream. Small or "micro" hydroelectricity systems can produce enough electricity for lighting and electrical appliances in an average home.

New legislation available from April 2010:

Feed in Tariff

Government support mechanism to incentivise small scale low carbon electricity generation upto 5MW. Two tariff's a generation tariff and an export tariff (much smaller)
Technologies that are covered under the legislation:-

- Solar Photovoltaic's (41.3p/kWh for retrofit upto 4kW
- Small scale wind (upto 5MW)
- Anaerobic Digestion (any scale) upto 2kW
- Micro CHP pilot - 30,000 units
- Hydro electric (upto 5MW)

NO feed in tariff for biomass CHP at any scale

New legislation available from April 2011:

Renewable Heat Incentive

Government support mechanism to incentive the generation of renewable heat.
Technologies that are covered under the proposed legislation:-

- Solid biomass (small, medium and large)
- Bioliquids (small installations only)
- Biogas onsite combustion (small & medium)
- Air (small & medium) & ground (small, medium & large) source heat pumps
- Biomethane injection (all scales)

1.6 – 2.5p/kWh for biomass CHP 500kW and above

Technology Options for Maylands

Combined Heat & Power

Photo courtesy of Wartsila

A 5MWe CHP scheme with district heating could potentially provide all the heat and power needs of the Gateway on a net annual basis.
The CHP facility will be able to qualify for renewable obligation certificates (ROC's) and the renewable heat incentive (RHI) and could potentially gain revenue from the heat sales to the business customers.

Solar PV

With the government's recently launched feed in tariff's (FIT's) solar PV is looking like a more viable investment opportunity for Maylands. A 4kWe system can receive 41.3p/kWh for generation **guaranteed** for 25yrs with an IRR of around 7-8%.
If only 25% of the roof area was covered by solar PV panels then 5.5MWp of installed capacity could be [illegible]at 29.3p/kWh **guaranteed** for 25yrs).

Wind

Four x 2MW wind turbines located to the north and east of the business park could reduce the baseline carbon emissions of Maylands by a quarter and provide an important maker, locating the park both visually and culturally as a centre of renewable energy development. (FIT's support upto 5MW of wind at 4.5p/kW **guaranteed** for 20yrs)

Delivery of the renewable energy solutions

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Technical viability

- A detailed technical appraisal of all renewable energy technologies & their potential at Maylands
- Energy demand mapping for all the businesses in the Maylands gateway to determine their energy usage.
- Assessment of suitability for solar PV, i.e. how many south facing roofs available.

Financial Viability

- Assessment of the funding mechanisms for all renewable technologies.
- Further sensitivity analysis for biomass CHP taking into account RHI's.
- Detailed financial model providing clear IRR's for all renewable technologies.

Delivery Options

- Energy Service Company (ESCo) deliver the renewable energy options
- Joint Partnership between Dacorum BC and Special Purpose vehicle (SPV) and appoint D&B contractor.
- Dacorum BC set up a joint venture with the ESCo to deliver infrastructure

Business Plan

- Compares the various ways in which provision of energy for Maylands business park can be provided reducing the carbon emissions for the businesses within it.
- Recommends the optimum technical solution (and the related costs) for the provision of the 90% carbon reduction energy solutions for Maylands.
- It also suggests a partnership approach to the delivery of the technical solution, and recommends further study to refine that delivery mechanism.