

Botham's of WHITBY

35-39 SKINNER STREET, WHITBY, NORTH YORKSHIRE, YO21 3AH

WWW.BOTHAM.CO.UK

NYMNP
The Old Vicarage
Bondgate
Helmsley
York.



October 29, 2019

Dear Mrs Saunders,

Re application NYM/2019/0477/FL.

As you suggested this letter is a statement of our intentions to utilize an extensive array of solar panels on the new bakery.

Our contractor for this is Oakapple Renewable Energy (Leeds) and I have enclosed copies of their scheme which include figures for carbon offset.

I should also mention that as part of our efforts to reduce carbon emissions where as at present we rely on gas for the ovens it is our intention to utilize an electric oven along with gas which will result in a 50% reduction of gas usage for baking.

Also the new gas ovens from Acrivarn of Leeds use burners that conform and exceed the very latest European specification for emissions.

We were so impressed by the scheme for the new build that we decided to retro fit a similar but 40kw array to the existing bakery at Enterprise way. We are led to believe that this would be a 'permitted development' ? I would be grateful if you could confirm this or advise on necessary steps?

I hope this provides the required information and I look forward to your decision on our plans in November.

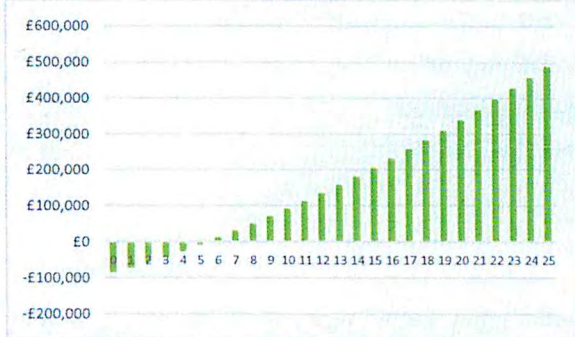
Yours sincerely

Nick Botham

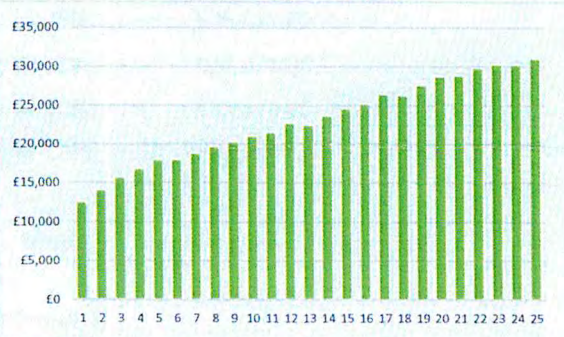
Figures are based on the following assumptions

- * Module degradation to 80% after 25 years
- * RPI based on Office for Budget Responsibility Economic and fiscal outlook - March 2017 Y1-Y5, Y6-Y20 at Y5 rate
- * Current Grid Bought power @ 14.47p
- * O&M costs not included in calculations
- * Assumed usage of Y1 production of 78%
- * Electricity Grid price based on Energy Price with RPI and Energy Increase
- * CO²/kW ratio 0.38443
- * FIT applicant owns less than 24 systems

Payback

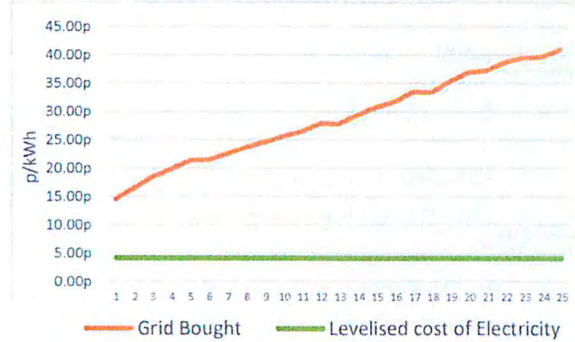


Annual Gross Benefit

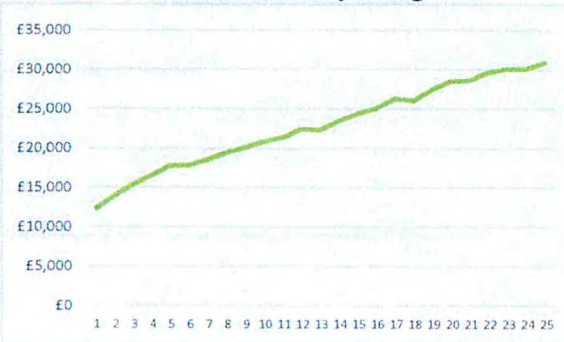


Payback in 5 years & 5 months	Estimated Generation (kWh)	Usage %	Estimated Usage	FIT Income	Export Income	Grid Saving	Gross Benefit	Payback (Initial payment £82684)	CO2 offset (kg/a) @ 0.38443 CO ² /kW
Year 1	109424	78%	85033	£0.00	£0.00	£12,304.28	£12,304.28	£-70,380.72	42066
Year 2	108412	78%	84606	£0.00	£0.00	£13,919.97	£13,919.97	£-56,461.76	41677
Year 3	107409	78%	84183	£0.00	£0.00	£15,465.31	£15,465.31	£-40,997.44	41291
Year 4	106415	79%	83761	£0.00	£0.00	£16,562.92	£16,562.92	£-24,435.52	40909
Year 5	105431	79%	83342	£0.00	£0.00	£17,754.06	£17,754.06	£-6,682.46	40531
Year 6	104456	79%	82926	£0.00	£0.00	£17,790.98	£17,790.98	£11,107.52	40156
Year 7	103490	80%	82512	£0.00	£0.00	£18,566.03	£18,566.03	£29,672.54	39785
Year 8	102533	80%	82100	£0.00	£0.00	£19,419.92	£19,419.92	£49,091.46	39417
Year 9	101585	80%	81690	£0.00	£0.00	£20,089.97	£20,089.97	£69,180.43	39052
Year 10	100645	81%	81281	£0.00	£0.00	£20,818.72	£20,818.72	£89,998.15	38691
Year 11	99714	81%	80873	£0.00	£0.00	£21,374.57	£21,374.57	£111,371.73	38333
Year 12	98792	81%	80468	£0.00	£0.00	£22,453.30	£22,453.30	£133,824.03	37979
Year 13	97878	82%	80064	£0.00	£0.00	£22,282.41	£22,282.41	£156,105.44	37627
Year 14	96973	82%	79663	£0.00	£0.00	£23,455.02	£23,455.02	£179,559.47	37279
Year 15	96076	83%	79264	£0.00	£0.00	£24,376.57	£24,376.57	£203,935.04	36934
Year 16	95187	83%	78866	£0.00	£0.00	£25,027.38	£25,027.38	£228,961.42	36593
Year 17	94307	83%	78469	£0.00	£0.00	£26,289.77	£26,289.77	£255,250.19	36254
Year 18	93435	84%	78073	£0.00	£0.00	£26,089.00	£26,089.00	£281,338.20	35919
Year 19	92571	84%	77680	£0.00	£0.00	£27,461.24	£27,461.24	£308,798.44	35587
Year 20	91715	84%	77288	£0.00	£0.00	£28,539.11	£28,539.11	£337,336.55	35258
Year 21	90867	85%	76898	£0.00	£0.00	£28,648.01	£28,648.01	£365,984.55	34932
Year 22	90026	85%	76508	£0.00	£0.00	£29,634.11	£29,634.11	£395,618.66	34609
Year 23	89193	85%	76120	£0.00	£0.00	£30,088.47	£30,088.47	£425,707.12	34288
Year 24	88368	86%	75735	£0.00	£0.00	£30,075.58	£30,075.58	£455,782.71	33971
Year 25	87551	86%	75351	£0.00	£0.00	£30,880.63	£30,880.63	£486,663.33	33657

LCOE vs Estimated Grid Price



Annual Electricity Saving

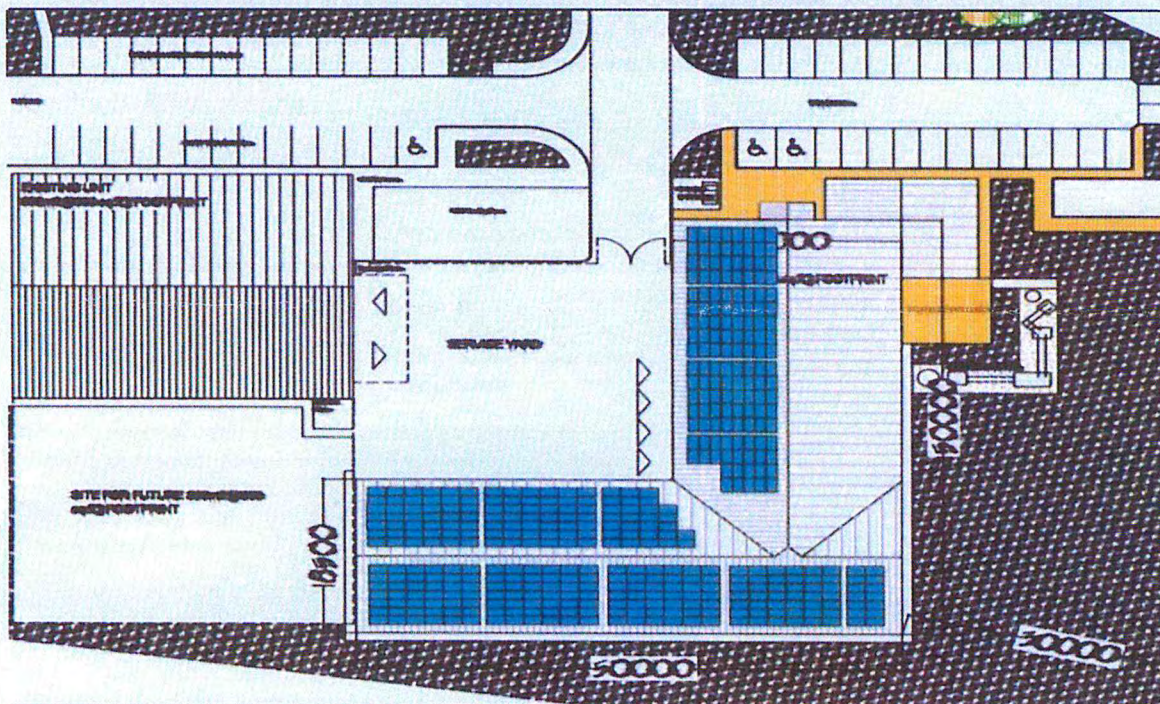


NYRANIDA
30 OCT 2019

Dear, Nick Botham

Following your recent enquiry please find below details of our proposal for the supply and installation of Solar PV at Bothams (New Build) 7b Enterprise Way Whitby YO22 4NH

Design



Total designed installation size of 123.12 kWp , producing an estimated 109424 kWh per annum