8	Installation of a 40.5 kWp Solar PV Array system on the building roof top. Proposed arrays are south facing. System can avail of the Clean Export Guarantee (CEG) tariff for any exported electricity. System size selected to incentivise self-consumption with the CEG tariff capped at 80% of generation capacity	€5,673	32,080 4,842 (Grid Feed In)	12.8	€50,625	8.9	System size selected to incentivise self-consumption with the CEG tariff capped at 80% of generation capacity. Total PV array area 196m² approximately 90 No. PV modules/panels. Planning per-mission not required. ***Note: Approx. 4,842kWh exported back to the grid at an estimated price of €0.135 per kWh. This Clean Export Premium is guaranteed for 15 years. Refer to Appendix 9.1 PV Sol Report for further details. *Structural survey of the existing roof will be required to deter-mine if the roof structure can support the addition-al load of the PV array system.***

1	Upgrade all glazed elements to triple glazed units meeting NZEB standards and all doors to high thermal performing units. Total glazed area 188m², total door area 32m², total roof light area 3.6m²	€1,111	18,464	5	€143,690.70	<100 years	All windows require upgrading to triple glazed units. This upgrade will improve the overall air tightness of the structure, and reduce outside air infiltration, and lower heat loss through this building element. The windows were replaced in approx. 2011 and have a U-Value of 2.6W/m²K. The proposed replacement windows have a U-value of 0.74 W/m²K. Payback is normally high on building fabric upgrades; however, it is important to lower heat loss, improve indoor environmental conditions, and limit the ingress of outside air. The existing roof windows have a U-value of 2.6W/m²K. The proposed replacement windows have a U-value of 1.3 W/m²K. The existing doors have an assumed U-value of 2.6W/m²K. The proposed replacement doors have a U-value of 0.74 W/m²K. Savings associated with in-filtration through the walls, windows, doors and roof are included in this measure.

2	EWI (External Wall Insulation) to all external wall areas. U-Value 0.18 W/m²K & 0.13 W/m²K compliant with NZEB standards. Total external wall area 771m²	€767	12,741	3.4	€71,229	<75 years	The external wall is poorly insulated with an assumed U-Value of 1.0 W/m²K (pre 1994 build) and 0.27 W/m²K (2008/2015 constructions). It is proposed to externally insulate the building with 100mm Kingspan Kooltherm K5 external wall board to achieve a U-Value of 0.18 W/m²K (pre-1994) and 0.13 W/m²K (pre 2015). Substantial builders works involved with scaffold, access etc. Whilst payback is poor, it is vital heat loss is minimised through the building structure.

8	Installation of a 40.5 kWp Solar PV Array system on the building roof top. Proposed arrays are south facing. System can avail of the Clean Export Guarantee (CEG) tariff for any exported electricity. System size selected to incentivise self-consumption with the CEG tariff capped at 80% of generation capacity	€5,673	32,080 4,842 (Grid Feed In)	12.8	€50,625	8.9	System size selected to incentivise self-consumption with the CEG tariff capped at 80% of generation capacity. Total PV array area 196m² approximately 90 No. PV modules/panels. Planning per-mission not required. ***Note: Approx. 4,842kWh exported back to the grid at an estimated price of €0.135 per kWh. This Clean Export Premium is guaranteed for 15 years. Refer to Appendix 9.1 PV Sol Report for further details. *Structural survey of the existing roof will be required to deter-mine if the roof structure can support the addition-al load of the PV array system.***