

Grantham Meres Leisure Centre Transitioning to net zero

APSE Sports and Leisure Management Network

Greener Leisure: Decarbonising Leisure
Facilities

22 January 2026



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LeisureEnergy
Sustainable savings



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Introduction



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Michael Chester

Team Leader – Leisure, Parks and
Open Spaces

Grantham Meres Leisure Centre – Background

- In March 2023, LeisureSK commissioned Leisure Energy to complete Energy & Sustainability Reports for three leisure centres; which also identified and included options for decarbonisation and the transition to net zero.
- In August 2023, Leisure Energy supported SKDC with the successful Sport England SPSF application which secured £399K of funding for Grantham Meres for Solar PV and delivered the project as principal contractor.
- In October 2023, Leisure Energy supported SKDC to prepare and write a Public Sector Decarbonisation Scheme application and provide technical support and expertise as part of the Salix evaluation process.
- South Kesteven District Council were successfully awarded a grant of **£3,587,500** for Grantham Meres Leisure Centre.
- The Council appointed Alliance Leisure Services as your delivery partner through the UK Leisure Framework.
- Alliance Leisure Services are managing the delivery of the decarbonisation project.
- Leisure Energy was appointed as Principal Designer and Contractor.



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Impact on Day-to-Day Operations

- Leisure Energy were able to design and build the NZP at their technology centre reducing the amount of downtime required on site during the early stages of construction
- Pool air handling units were replaced early in the programme during the summer months avoiding any pool closures
- 2x electrical shutdowns in November 2025 for the connection of a temporary generator and disconnection for the new substation and electrical supply – max 2 hours
- Pool closure in January 2026 for the replacement of plant room valves due to them failing and being unable to isolate, requiring specialist divers and bungs being used in the pool totalling c. 14½ hours across two days avoiding peak sessions



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Development Partner Approach



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Seb Rowe
Alliance Delivery Manager



UK leisure
framework



AllianceLeisure

- UK's leading leisure development partner supporting local authorities to modernise and future-proof community leisure assets
- Proven delivery across all scales, from £40m+ new builds to targeted retrofit and decarbonisation programmes like Grantham Meres
- **Our mission is to make public leisure sustainable and to build healthier communities**
- End-to-end support, from RIBA 0 Strategic Definition through to RIBA 7 Use and Beyond
- Integrated expert team covering procurement, funding, legal, delivery, operations, and stakeholder communications



280+
projects delivered

£450m
Invested in local authority leisure



25+
Years in business





AllianceLeisure

Our specialties.

Our range of developments across 25 years of business has included all types of leisure facility, from the large-scale transformation of leisure portfolios through to playgrounds and 3G pitches. Our extensive repertoire also expands to cultural and heritage sites. With leisure centres, theatres, restaurants, woodland cafes, spas, bowling alleys, wellbeing hubs and more featuring in our repertoire.

Leisure

Sport

Heritage &
Culture

Health &
Wellbeing

New build

Refurbish

Renew

Leisure centres

Soft play

Swimming
pools

Museums

Waterparks

3G pitches

Theatre spaces

Wellbeing
hubs

Playgrounds

Adventure
centres

Leading the transition to net zero leisure facilities



Mike Ardis, Technical Director

Charlie Manns, Project Manager

Principal Designer and Contractor

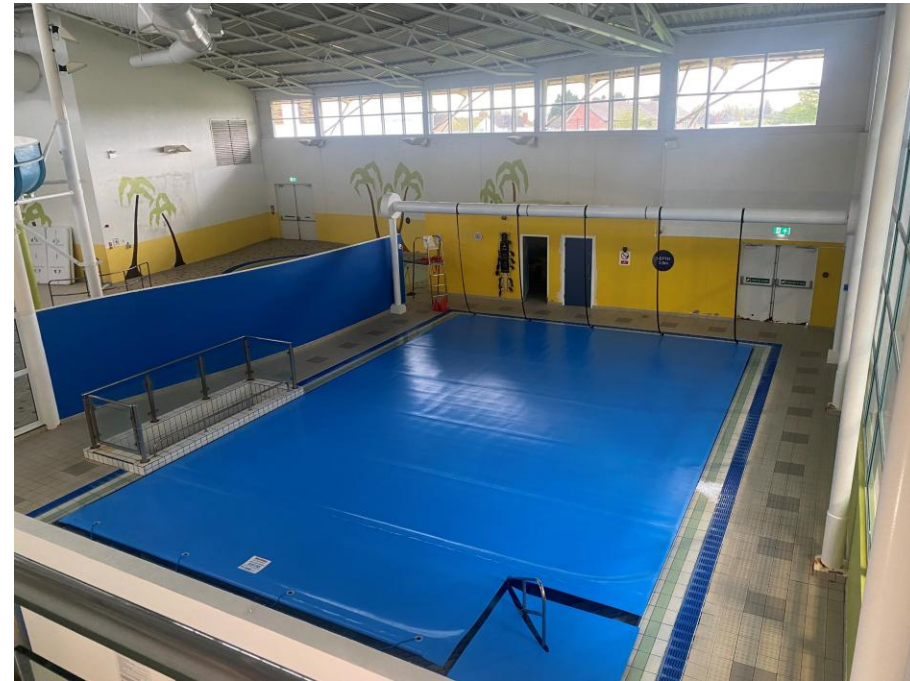
Decarbonisation and Solar PV Projects @ Grantham Meres Leisure Centre

- Overview of works at GMLC
- Net Zero Pod – What, why and how?
- The impact and environmental benefit of the Solar PV
- The impact and environmental benefit of decarbonising the leisure centre

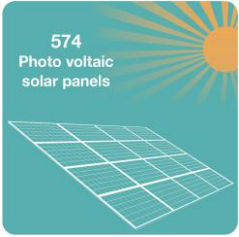


Grantham Meres Leisure Centre – Other Works

- Planned upgrade of pool pump circulation equipment to be completed by early 2026
- Upgrade of lighting to LED in main and small sports halls
- Upgrade of floodlighting to LED for 3G and stadium pitches
- Installation of pool covers using portion of the Sport England funding



Solar PV – Renewable energy

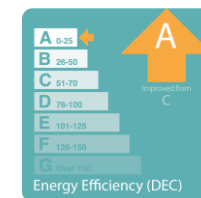
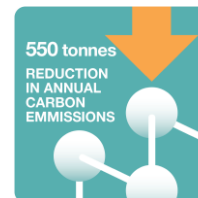
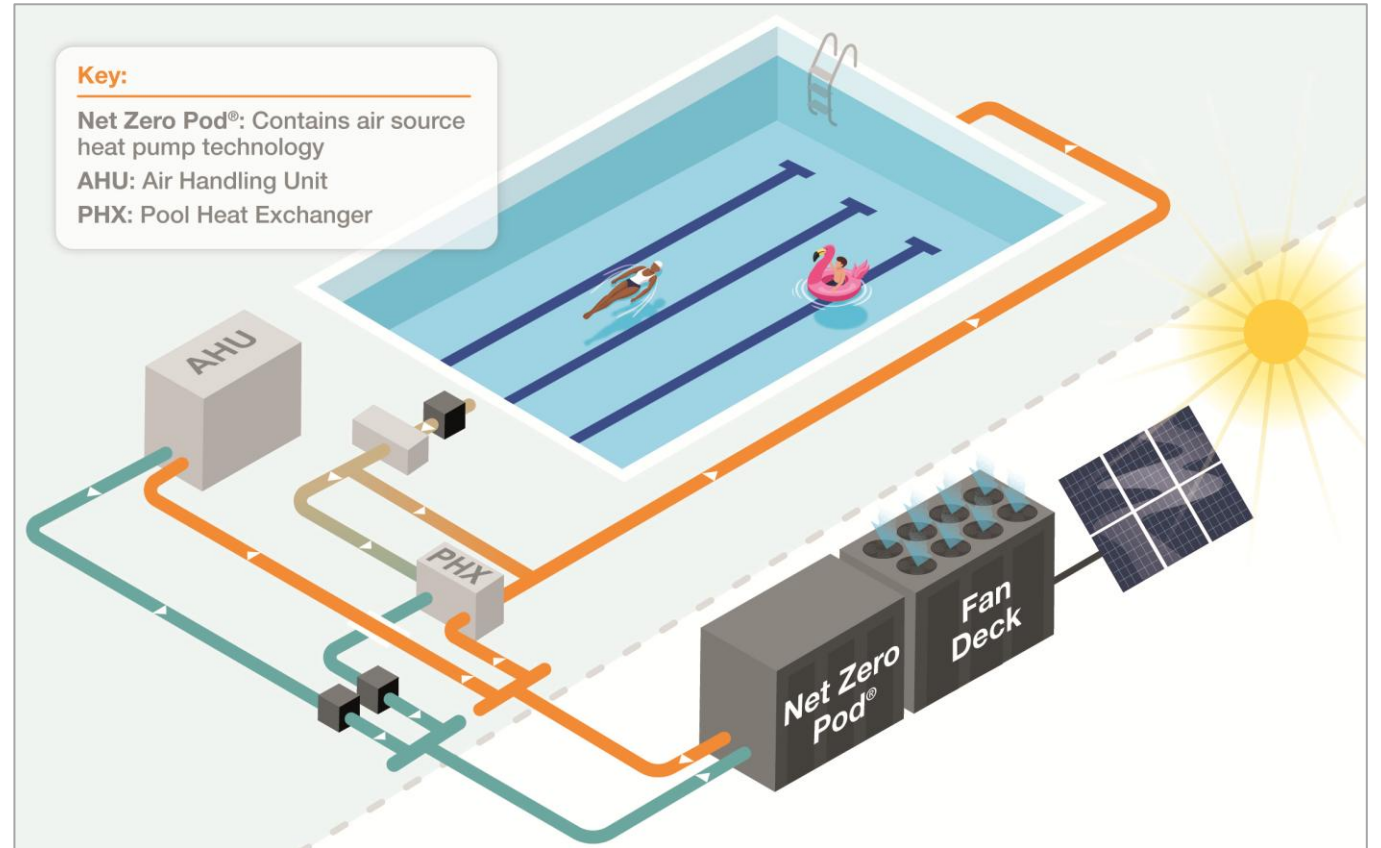


- Prior to Solar PV the Leisure Centre used 624,149 kWh of electricity from the grid.
- 237,658 kWh solar electricity was generated during initial 12 months (38% of its need)
- Grid electricity savings were 185,867 kWh
- Solar generation exported 51,701 kWh back to the grid
- Total financial benefit was **£36,492** during initial 12 months
- The environmental impact has been a reduction of **42,050 kg CO2 e.**



Decarbonisation – electrification of the leisure centre

- **Net Zero Pod® (NZP750)** Packaged Plant Room – A tri pack (3 x 250 kWth) CO₂ Air Source Heat Pump solution operating in a duty/assist arrangement. Tri temperature 70°C flow, 30°C return. Plus, a 3 x V-Bank Evaporator.
- A unique solution to accommodate the site constraints – NZP location to be confirmed.
- Building integration and upgraded heating systems.
- Pre decarbonisation running costs £347,000 p.a.
- Post decarbonisation estimated running cost significantly reduce to £173,965.
- **Reducing the operating cost of the leisure centre by £173,035 p.a. (inc. Solar PV)**



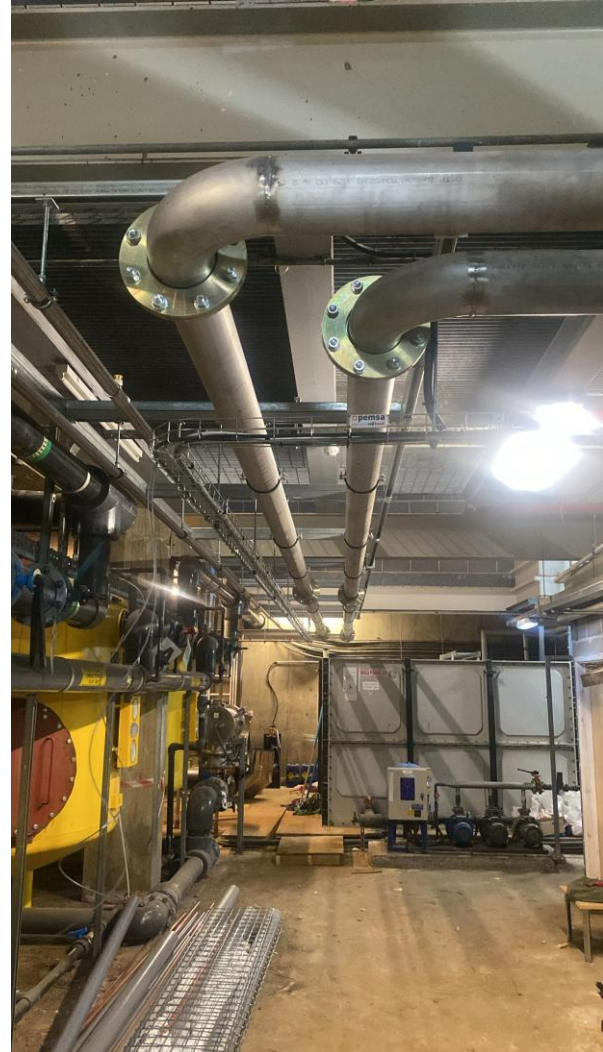
Net Zero Pod[®] Delivery



Images of NZP and other works at Grantham



Images of NZP and other works at Grantham



Images of NZP and other works at Grantham



Images of NZP and other works at Grantham



Net Zero Pod[®] Applications

1. **Full Decarbonisation/Electrification** – complete removal of fossil fuels (i.e. Gas Boilers) = NZP + Solar PV + *[Battery Storage where the case stacks up]*.
2. **Hybrid - Facilities with Combined Heat & Power Units (CHP's)** – working in harmony with a CHP, sized accordingly and set-up for when CHP is removed = NZP + CHP + Solar PV + *[Battery Storage where the case stacks up]* to maximize the financial savings (or still in contract / not end of life).
3. **CHP Replacement** (end of life / out of contract) providing compelling financial alternative = NZP + Solar PV + *[Battery Storage where the case stacks up]*.
3. **Bi-Valent** – Low cost (capital) entry to focus on maximizing savings = Gas Boilers + NZP + Solar PV.
4. **New Build** – fully electrified, packaged and skid solutions.
5. **Funding routes** – Cash reserves, bank borrowing, power purchase agreements, leases and energy as a service – 15 – 20 years. This can be on / off balance sheet.



Case Study: Funded Solution

- Removal of Gas Boilers – 100% removal.
- **Net Zero Pod[®]** (NZP800) Packaged Plant Room – A twin pack (2 x 400 kWth) CO₂ Air Source Heat Pump solution operating in a duty/assist arrangement. Dual temperature 70°C flow, 30°C return. Plus, V-Bank Evaporator – sCOP 4.25. (8m x 3.5m)
- Costed option to restore the AHUs to full operation.
- Package Plant and evaporators to be located on steel plant deck local to the plant room to reduce pipework runs and associated costs.
- Changing all circulation pumps to IE5 VSD, replace selected coils / plate heat exchangers and install energy valves on selected terminal units.
- Building integration and upgraded heating systems.
- Cooling Solution.
- Operating cost reduction from NZP (heat load) and Chiller. Optimisation potential will yield further savings along with time of use tariff.
- In absence of any further PSDS funding. The alternative is through an externally funded solution which Leisure Energy can provide – through an energy as a service model. Available to both the Public and Private Sector.



- ❑ Borrowing £1,901,260 over 15 years facilitated by Leisure Energy.
- ❑ One monthly payment for 15 years (180 months).
- ❑ £2,310,000 estimated revenue savings from solution over term (Excludes Solar PV / other ECM's)
- ❑ Additional lifecycle capital savings over term.
- ❑ Optimisation and maintenance package provided by Leisure Energy for the full 15-year term.



The Solution

If you could reduce your operational costs, make your leisure facility cleaner and greener, with no up-front cost – would you be interested?

1. Making decarbonisation [electrification] affordable.
2. Delivering significant on-going revenue savings.
3. Providing energy security and derisking the future.
4. Access to capital so there is no up-front cost.
5. Blended solution of technologies to deliver maximum benefits.
6. Off-site assembly to minimise impact on customers and business.
7. Expertise and unique understanding of leisure/swimming pools with a programme delivered around the operational requirements and protecting revenue streams and the customer experience.
8. Delivered through the UK Leisure Framework in partnership with Alliance Leisure / Leisure Energy.

You can find more information and case studies of previous projects below, alternatively you can contact us

at: info@leisure-energy.com

[Energy and Carbon Emission Case Studies for Leisure | Leisure Energy](#)

[Net Zero Pod | Leisure Energy](#)



Any questions?

