ISLE OF ANGLESEY COUNTY COUNCIL	
Report to:	**Executive Committee**
Date:	**8th September 2014**
Subject:	**Japan Learning Visit Report**
Portfolio Holder(s):	**Cllr. Ieuan Williams** **Cllr. Aled Morris Jones**
Chief Executive:	**Richard Parry Jones**
Report Author: Tel: E-mail:	**Dylan J. Williams** **Head of Economic & Community Regeneration** **01248 752 499** **dylanjwilliams@anglesey.gov.uk**
Local Members:	**Relevant to all Members**

A –Recommendation/s and reason/s
No recommendation – report for information only.

B – What other options did you consider and why did you reject them?
Not applicable.

C – Why is this decision for the Executive?
Not applicable.
CH – Is this decision consistent with policy approved by the full Council?
The content of the Japan Leanring Visit Report is consistent with the IACC's Corporate Plan; the Economic & Community Regeneration Service Business Plan; and the Energy Island Programme.

D – Is this decision within the budget approved by the Council?
Not applicable.

DD – Who did you consult?		What did they say?
1	**Chief Executive / Strategic Leadership Team (SLT)** (mandatory)	
2	**Finance / Section 151** (mandatory)	
3	**Legal / Monitoring Officer** (mandatory)	
4	**Human Resources (HR)**	
5	**Property**	
6	**Information Communication Technology (ICT)**	
7	**Scrutiny**	
8	**Local Members**	
9	**Any external bodies / other/s**	
1	**Economic**	
2	**Anti-poverty**	
3	**Crime and Disorder**	
4	**Environmental**	
5	**Equalities**	
6	**Outcome Agreements**	
7	**Other**	

F - Appendices:
Japan Learning Visit Report.

FF - Background papers (please contact the author of the Report for any further information):

CYNGOR SIR YNYS MÔN ISLE OF ANGLESEY COUNTY COUNCIL

YNYS YNNI MÔN ANGLESEY ENERGY ISLAND

Grŵp Llandrillo Menai

Economic & Community Regeneration

Japan Learning Visit

August 2014

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1.0 Introduction

1.1 HNP (Horizon Nuclear Power) invited a mixed group of officers, politicians and representatives from Anglesey/ Wales to visit Japan (June 2014). The purpose was to improve knowledge, understanding, see an ABWR new build site, Hitachi's advanced manufacturing capabilities, and establish working relationships with senior representatives of Hitachi Ltd and Hitachi GE Nuclear Energy Ltd.

1.2 Following participation by IACC Officers and Members in "An Understanding Japanese Business & Culture" Workshop (organised and facilitated by Bangor University, January 2014), it became evident that "doing-business" with Japanese owned businesses requires a different approach to that taken in Britain. To better understand, embrace, and influence Hitachi, representatives from Anglesey needed to visit Japan – responding to the Japanese business culture. Hence the County Council accepted the invitation.

1.3 During the four days in Japan the delegation visited the Hitachi Executive briefing Centre, Hitachi and Hitachi GE head offices in Tokyo; the Ohma Nuclear power station (under construction) on the Shimokita Peninsula (Aomori Prefecture District) at the northern most point of the main Island; and Hitachi City to view key manufacturing facilities for turbine, generator and reactor components.

1.4 The aim of this report is summarise the visit, knowledge acquired, key learning points, and conclusions.

2.0 Background

2.1 HNP (Horizon Nuclear Power), the developer and operator of the proposed Wylfa Newydd is 100% owned by Hitachi of Japan. HNP will be contracting with Hitachi GE Nuclear Energy Ltd. (an 80% owned Hitachi subsidiary), to construct the power station. The preparation of the Wylfa site and off-site associated development works will by commissioned by HNP directly. After completion of the build phase, HNP will be responsible for the operation and maintenance of the site

2.2 IACC, EIP, Grŵp Llandrillo Menai and WG (Welsh Government) have well established working relations with HNP. However, other than the original announcement of their taking ownership of HNP, direct contact with Hitachi has been limited. With HNP commencing work on their procurement contract with HGNE (Hitachi GE Nuclear Energy Ltd.), there is a need for the IACC and it's partners in this important venture to engage directly with Hitachi and Hitachi GE in Japan to improve understanding of the ABWR (Advance Boiling Water Reactor) power station, the supply chain, procurement policies, construction methodology and approach workforce requirements and impact onlocal communities. HNP were prepared to make the necessary introductions and arrange a detailed programme of site visits, briefings and meetings.

2.3 The knowledge and improved understanding acquired will be utilised to ensure the IACC makes informed decisions in relation to the proposed new nuclear build development at Wylfa Newydd.

3.0 Purpose of Visit

3.1 The IACC accepted the invitation to participate in the visit with a view to improving knowledge, awareness and understanding of:

- The nuclear new build process.
- Procurement and supply chain processes (and potential opportunities)
- Skills and labour market opportunities.
- Supply chain/ inward investment opportunities.
- Construction approach for ABWRs
- Associated developments and enabling infrastructure (scale).
- Potential local community impacts (opportunities and challenges).

3.2 The visit also provided an unique opportunity to raise the profile and understanding of the IACC's ambitions and aspirations, whilst establishing relationships and directly engaging/ influencing senior representatives of both Hitachi and HGNE.

3.3 The experience, knowledge, learning and opportunity to influence directly could not be attained by visiting other sites or countries (or by IACC arranging/ facilitating its own learning journey independently of HNP and the other invited stakeholders).

3.4 A copy of the presentation which summarises the key IACC messages to the senior Hitachi and HGNE representatives can be viewed in **Annex A**.

4.0 Delegation

4.1 The IACC individuals/ representatives who were invited and participated were:

- Cllr. Ieuan Williams (Leader).
- John Idris Jones (Energy Island Programme).
- Dylan Williams (Economic Development/ Energy Island Programme).

4.2 The other individuals/ representatives who were invited and participated were:

- Albert Owen MP.
- Rhun ap Iorwerth AM.
- Dennis Evans (Chair of Wylfa Newydd Project Liaison Group).
- Ian Rees (Coleg Menai).
- Gwenllian Roberts (WG).

4.3 A financial breakdown of all costs associated with the learning visit, incurred by the 3 representatives of the IACC are outlined in **Annex B.**

5.0 Itinerary Overview

Date:	Activity:
Saturday 21st & Sunday 22nd	Travel from Anglesey to Tokyo, Japan
Monday 23rd	Introductions, overview and presentations – Hitachi Executive Briefing Centre
Tuesday 24th	Visit to Ohma Nuclear Power Station
Wednesday 25th	Visit to Hitachi Works, Hitachi City
Thursday 26th	Visit to Hitachi Offices, Tokyo
Friday 27th	Travel from Tokyo to Anglesey, Wales.

5.1. In addition to the knowledge and improved understanding acquired by visiting the above locations, the seniority of the Hitachi Ltd. and HGNE Ltd. representatives met must be emphasised. The key decision makers and influencers from both companies (in relation to the potential Wylfa Newydd development), welcomed the delegation, and spent time in formal and informal dialogue. This provided an unique opportunity to develop trust, outline the IACC's expectations and ambitions to collaborate and ensure the potential development is a catalyst for positive economic transformation.

6.0 Learning and Knowledge Acquired

6.1. The visit gave opportunity to meet and start to build a longer term relationship with senior key Hitachi and Hitachi GE management. It gave a glimpse of Japanese culture and a valuable insight into Japanese society. Safety enhancements and learning following Fukushima were shared openly and unprompted throughout the visit.

6.2 <u>Hitachi Executive Briefing Centre, Tokyo</u>

6.3 The Centre is new with the delegation from Wales being the first visitors. It provides an overview of the history of Hitachi, current business activities (including engineering and electronics) values and vision. It is also a modern, fit-for purpose environment where introductions were made and the expectations (from the visit and the Wylfa Newydd development) were highlighted.

6.4 Key points:

- History and credentials of Hitachi highlighted (from beginning in 1910 with 5kw electric motor to present day).
- Energy important, but company much broader and bigger.

- 100 year commitment from Hitachi to Anglesey and the communities re-emphasised. (By implication – safety of plant has to be paramount to ensure the longevity of the investment and of the commitment to Anglesey)
- Importance of mutual benefits from the Wylfa Newydd development highlighted.
- Expectations in terms of local employment and supply chain opportunities highlighted.
- Importance of Welsh language and culture identified
- Need to take account of and address the valid concerns of all of the community.
- Need to invest and develop skills/ capability of young people emphasised.
- Importance of the Wylfa Newydd project to Hitachi emphasised.
- Commitment of Welsh Government, Isle of Anglesey County Council, and Grwp Llandrillo Menai to collaborate to maximise local, regional, and National benefits emphasised.
- The need to consider what happens after the completion of the nuclear build phase.

6.5 Visit to Ohma Nuclear Power Station

6.6 Located on the Shimokita Peninsula (Aomori Prefecture District) at the northern most point of the main Island, construction has partially restarted on the nuclear new build development (following the natural disaster in March 2011). Following overview presentation, the delegation were given a guided tour of the site with stops at two viewing decks (1 above whole site and 1 above cooling water infall/ outfall); and the reactor building. No photographs were permitted on site. Full safety equipment compulsory for all visitors.

6.7 The Shimokita peninsula where the new power station site is located can be described as:

- Rural, peripheral, coastal;
- 660km from Tokyo;
- Ohma town (adjacent) population of c.6,000;
- Limited development space between sea and hills across the district – rugged hinterland;
- Ribbon development along highways (continuous) - no visible settlement boundaries;
- Fishing prominent along coast (tuna main catch);
- Forestry and lumbering also prominent (pine, cedar and larch trees);
- Man-made coastal defences, also used as jetties/ ports;
- Limited tourism/ visitor provision and infrastructure;
- Road infrastructure equivalent to A-road quality;
- Other nuclear developments elsewhere on the peninsula.

6.8 The development can be described as: Operator (and customer) of Ohma site – Jpower

- Main build contractor (66%) Hitachi;
- 1 Reactor Unit - 1,383 MW (ABWR). (Note that Wylfa Newydd will consist of two ABWRs);

- 18 month construction delay following the natural disaster in March 2011;
- Construction partially restarted October 2012.However, currently awaiting final clearance of design enhancements before recommencing full construction work;
- 1.3 million meter square construction site Lush green site with numerous levels and foliage/ plants (following initial ground works/ site preparation);
- Office/ administration block (J Power) completed permanent structure;
- All main contractors/ suppliers have large separated compounds, temporary offices and workshops;
- Limited visibility until in very close proximity to the site (crane main structure).

6.9 The construction overview:

- 4 main contractors/ suppliers - Hitachi, Toshiba, Mitsubishi, and J Power;
- 65% of development undertaken by Hitachi. (Nb. Site information provided from Hitachi perspective of build process, not integrated/ holistic picture);
- No on site damage from natural events which caused Fukushima disaster (i.e. earthquake and tsunami);
- Reactor building - large block/ module construction method (modules assembled in close proximity/ adjacent to final installation position);
- The Reinforced Concrete Containment Vessel (RCCV) steel component frame was assembled on site and lifted to place. Rebar was being put in place when we were there. This would then be filled with concrete;
- Additional features designed/ built in following the disaster in March 2011. Awaiting final regulatory clearance;
- All weather construction;
    i. Work conditions for reactor building similar to factory shop;
    ii. RCCV assembly; temporary roof; winter shield shut for welding lines giving reliable welds.

- On site cement mixing facility (raw materials brought in by sea);
- MOLF (marine off load facility) and cooling water structures (in place); Turbine building basement construction;
- Estimated 100 ships visit MOLF per year;
- Estimated 2,000 truck movements on roads to/from site per year.

6.10 The workforce/ employment overview:

- Recruited local people where possible in the civil work area then from neighbouring areas;
- Hitachi had large workforce which moved in from other contracts which had been completed in the area;
- On site simulator for training (similar likely to be at Wylfa);
- Workers Accommodation facility adjacent to site (Hitachi) – 550 workers;
- 700 currently on site (250 of which are Hitachi); which will ramp up as full construction recommences;
- 1,200 estimated maximum Hitachi on-site workforce prior to operation (3,000-4,000 site total) 8am - 5pm shift time (+ additional 2 hours overtime when required);
- 200 hours maximum permitted monthly working hours per person Civil engineering contractor's main employer of local people (1,000 peak workforce).

6.11 Hitachi Works, Hitachi City

Hitachi City is located on the Pacific Ocean coast in Inaraki Prefecture with a population of c.190,000. Hitachi Works covers 1,220,000 meter squares with 5 factories/ sites (including port facilities for import/ export) with 10,000 employees. 50 years of manufacturing/ fabrication experience and capability on site.

6.12 The visit consisted of a greeting and informal session with Mr. Nakanishi (Chairman of the Board and CEO, Hitachi Ltd.); presentations on the works history and capability; the design process for nuclear power plants; and tour of the manufacturing facility.

6.13 Hitachi's commitment to Anglesey and Wales reiterated. Hitachi commitment to excellence, safety, and 50 year history of manufacturing nuclear reactor component parts was also highlighted.

6.14 Introduction to Hitachi GE Energy

- 4 ABWR deployment programmes since 1970's;
- 4 ABWR currently under construction (2 in Japan, 2 in Taiwan) check?
- Reactor Pressure Vessel weights 910 tonnes;
- Control room layout and installation equipment also manufactured in Hitachi City;
- Staff currently deployed on Wylfa Newydd planning and development. Team based in Hitachi City;
- Key activities/ focus on procurement, construction planning, project management, and integrated computer aided design of the plant/ site.

6.15 Introduction to Hitachi Plant CAE (Computer Aided Engineering) Systems

- 1200-1600 components per reactor;
- 100-120km of piping per reactor;
- 4-5 year construction programme from 1st concrete preceded by some 4-5 years design and planning;
- Detail layout planning being undertaken;
- 1st generation (1975-1980) - 190,000 drawings per reactor;
- CAE enables everything to be digital;
- Current integrated CAE System (3D modelling) looks at all aspects of the development - basic design concept, detail design, plant design and manufacturing, structural analysis (for licensing), construction planning, operation and maintenance, and decommissioning. (Enabling Hitachi GE to demonstrate to the regulator how the ABWR will be decommissioned in the UK and Horizon to better justify the Funded Decommissioning Plan, produced before Wylfa Newydd is started);
- Hitachi manufacturing experience, knowledge and capability reduces GDA risks;
- UK regulators have visited Hitachi sites in Japan to observe, discuss and question Hitachi on safety case and quality arrangements for manufacturing components, building and operating the nuclear reactor;
- Construction Strategy will improve efficiency;

- Assembly location of modules not decided;
- Rapid development and deployment of ICT technology on site essential;
- Currently exploring local supply chain;
- Electronic installation manual i.e. video technique and real time monitoring.

6.16 Works Tour

- Some 50 years of high quality manufacturing experience with a continuous improvement process approach. Visited heavy component manufacturing shop, reactor key component manufacturing shop, BWR maintenance technology centre and test facility of control rod scrammability (ability of control rods to shutdown nuclear reactions, in the core of the reactor) under seismic conditions;
- All major internal components of the reactor pressure vessel manufactured on site;
- Temperature controlled clean factory manufacturing conditions – including construction of large components with fine tolerances and detailed non-destructive testing capability to demonstrate plant and weld integrity;
- Reactor Containment vessel (RCCV) manufactured on site;
- Spent fuel racks manufactured on site. (used to store the nuclear fuel under water after being removed from the reactor);
- Dry Casks (storage and transportation modes - dual purpose) manufactured on site. Used to store used fuel some 4-5 years after fuel has been removed from the reactor. Such casks are used worldwide for on site storage of fuel longer term some 5 years after removal from a reactor. Can also be used to transport used fuel off site;
- USA, Switzerland Taiwan have export experiences of different components. ASME standards used;
- Performance test facility for components prior to shipping (Control Rod Drives - 100%);
- Tested under different seismic conditions to demonstrate actual seismic response behaviour 60mm amplitude max capacity +/- (Fukushima amplitude was 30mm) - movement at core of nuclear fuel rods;
- Reactor preventative maintenance technology centre. Potential for remote plant monitoring;
- Importance of skills development for young people – pride in artisan skills and technical knowledge;
- Two year social training programme for young technicians, several skill categories;
- Skills Olympics - 50 previous Olympians on site as leaders;
- Pride in individual’s skills : "Rivet your soul into your work" – spirit;
- Safety most important part of nuclear business - manufacturing plays a critical role in safety. Very clear emphasis on safety during all our site visits;
- ABWR fuel:
  a. Enrichment probably about 3.9-4% (cf EPR of 4.5-5% enrichment);
  b. Enrichment varies in a fuel bundle;
  c. Fuel used at Wylfa Newydd will be the same as used in boiling water reactors (bwrs) in other parts of the world (currently operating

in countries such as USA, Sweden, Switzerland and Spain – as well as Japan);

d. Note – misleading comments of anti-nuclear protesters regarding fuel being 'hot'. No different to fuel in bwrs used elsewhere in the world. It is possible to move fuel into dry casks after 5 years. The casks are stored in an air environment and can be moved off site for central storage.

- At Hitachi City, facility exists to move large components from factories to port facilities for shipping;
- Hitachi undertaking joint venture with MHI (Mitsubishi) on turbine technology.

6.17 <u>Officer discussions with HGNE on Wylfa Newydd Commercial and Supply Chain Issues.</u>

Present were Dylan Williams (IACC), Dr John Idris Jones (Energy Island Programme Director), Gwenllian Roberts (WG) and Dr Ian Rees (COleg Menai)

6.18 The meeting between officials was focussed on improving overall understanding and awareness of HGNE's approach especially to supply chain development (in relation to Wylfa Newydd); outlining local expectations on the Island; workforce and training requirements; support available from Welsh Government and how the public sector can collaborate to enhance benefits and outcomes.

6.19 A copy of the presentation which summarises the key IACC/ Coleg Menai messages can be viewed in **Annex A**. Key points can be summarised as:

- Anglesey and North Wales has extensive nuclear capabilities;
- The local workforce can play a major role in the delivery and operation of Wylfa Newydd;
- The high quality facilities available at Coleg Menai's Llangefni Campus along with the college's willingness and plans to actively support this development
- EIP (Energy Island Programme aspiration is to put Anglesey at the forefront of energy research, development, production and servicing;
- Appropriate engagement can maximise opportunities for Anglesey (and North Wales) firms and workers, and de-risk Hitachi-GE's work;
- Recognition that much of the project scope cannot practically be sourced on Anglesey, but committed to maximising the content that is (and for Wales);
- Information requested on initial/ outline Hitachi workforce expectations to inform education and skills development decisions.

6.20 Key points made from Welsh Government:

- Wylfa Newydd project has National significance;
- Commitment to maximising Welsh economic content from the project (eager to collaborate);
- Ambitions beyond the Wylfa site - also working to secure new/ further associated inward investment;
- Significant capability and capacity in Wales;
- 50 Japanese businesses already located across Wales;
- Recognition that HGNE can make no compromise on cost, quality or capacity;

- Most comprehensive business development/ support programmes across UK available in Wales;
- Welsh Government currently developing programme of targeted business support – resources available;
- Importance of early information sharing to raise awareness of opportunities amongst local/ National supply chain and to develop support programmes to increase capability;
- Importance of Holyhead Port emphasised;
- Potential EU resources for infrastructure improvements.

6.21 Key points made by HGNE Ltd:

- ABWR - proven technology;
- Potential structure of delivery team being developed;
- Major envisaged role for Welsh companies, but must meet necessary standards on cost, capability and capacity;
- Potential areas of scope and opportunity for Welsh, and wider UK companies identified
- Labour market capacity and capability being considered on Anglesey, North Wales, Wales, and UK basis;
- Overview of key items Hitachi-GE will seek to directly procure;
- Overview of key goods and services Hitachi-GE will seek to procure through (or in partnership with) its construction partner or supply chain partners;
- Overview of the likely timeframes for major steps in the supply chain development process;
- HGNE Ltd. are the EPC (Engineer Procure Construct) contractor for Wylfa Newydd. 2018/2019 start date once all permissions secured. They control and influence procurement, local contracts, sourcing etc. (build phase). Horizon will be the main contracting agent for all work up to 2018/19. They will still have overall responsibility for the Hitachi GE work during the build phase (showing themselves to be an intelligent customer of the building work done by Hitachi GE) and they will then be the enduring entity during the operational phase.

6.22 Key Outcomes

- Agreement for regular engagement and information sharing;
- Need to develop a clear picture of skills demand in: Infrastructure, Services, Construction capability and Supply chain appointment;
- Interest in seeing relationships developed between Coleg Menai and Japanese colleges, for placement opportunities, scholarships etc;
- The value in sharing Japanese expertise (both technical and cultural/linguistic) was noted;
- The importance placed on a skilled workforce who are nuclear-ready (from a H&S and attitudinal point of view)
- Quantity surveyors will be needed. Project Management capability required at all stages of the project/ programme;
- How can quality assurance/ capabilities of small businesses in Anglesey/ Wales be assessed?
- Increasing awareness of Japanese business culture and language abilities in North Wales;

- Important not to lose focus of skills and services required during the operation & maintenance period;
- Possible longer term opportunities for HGNE support facilities in area during the operating phase of Horizon's Wylfa Newydd;
- Senior Hitachi GE personnel will be located in UK from the Autumn;
- This is the start of building longer term relations with senior Hitachi and Hitachi GE personnel to benefit Anglesey and Hitachi.

7.0 Key Learning Points

a. Mutual benefits essential, public/ private commitment to joint working.

b. Importance of the Wylfa Newydd development to Hitachi Ltd. clearly evident. Personal 100 year commitment from the Hitachi Ltd. Chief Executive Officer to Anglesey and its communities emphasised.

c. Improved understanding of HGNE (Hitachi-GE Nuclear Energy Ltd.) procurement methods, process, timescale, requirements, opportunities.

d. Direct engagement and relationship building with senior/ influential Hitachi Ltd. and HGNE Ltd. individuals has begun and has to be built upon.

e. Critical success criteria for Anglesey/ Wales emphasised to senior/ influential Hitachi Ltd. and HGNE Ltd. individuals.

f. HGNE Ltd.: key organisation that has influence in relation to procurement, local content/ sourcing etc. during the new build phase.

g. HGNE Ltd. are the EPC (Engineer Procure Construct) contractor for Wylfa Newydd. 2018/2019 start date once all permissions secured. Control and influence procurement, local contracts, sourcing etc. (build phase). Horizon will be the main contracting agent for all work up to 2018/19. They will still have overall responsibility for the Hitachi GE work during the build phase (showing themselves to be an intelligent customer of the building work done by Hitachi GE) and they will then be the enduring entity during the operational phase.

h. Significant supply chain opportunities during build phase but high quality standards and commercial competition. Supply chain strategy for build phase under development (and associated appointment of main contractors). There will be focused opportunities for the North Wales supply chain, but further work is required to understand what can be delivered.

i. Horizon control and influence procurement, local contracts, sourcing etc. for the preparatory phase (up to 2018/ 2019).

j. Importance of Operational & Maintenance requirements (servicing and direct employment) post 2025 emphasised (long term benefits). 3rd phase of the development.

k. Additional safety features built into design following Fukushima disaster including infrastructure and site layout.

l. Improved understanding of what components could be manufactured in the UK (not likely to be nuclear island large items and long lead items). Block module construction of components takes place as close to final installation position as possible (transported to site by sea).

m. Safety most important part of nuclear business (emphasised) - manufacturing plays a critical role in safety. Essential that all workforce are “nuclear-ready” (H&S)

n. HGNE manufacturing facility very impressive (precision high end manufacturing). Emphasis on quality, quality control, skills and developing young people. Compete and win at international skills Olympics.

o. Importance of proactively planning education and training programmes to meet the requirements of contractors and operators in a timely manner.

p. Complexity and scale of development immense - but have improved understanding of process, time scales, roles and responsibilities.

q. Estimated 50 people at HGNE Ltd. currently working on Wylfa Newydd through integrated computer aided design - basic design concept, detail design, plant design and manufacturing, construction planning, operation and maintenance, and decommissioning.

r. 3D fly through of provisional site layout – will be seen as part of PAC1 process (September 2014) - impressive!

s. Agreement for engagement and information sharing to achieve mutual benefits. Establishment of working relationship with senior HGNE Officials who will be based in the UK form autumn 2014.

t. Generic/ transferable project management, quantity surveying, and IT skills of vital importance.

u. Discussed aspiration for internship programme for people from Anglesey/ North Wales in Hitachi Ltd./ HGNE Ltd.

v. Welsh Government establishing nuclear specific team (related to supply chain development and possible other issues) which should complement EIP. Need to collaborate and influence and ensure synergy and alignment with EIP, whilst improving support for supply chain etc.

w. Nuclear fuel used and spent nuclear fuel storage on site after removal from reactor is proven technology used around the world.

8.0 Conclusion

a. The IACC now has a better understanding of the processes and the scale of opportunities associated with nuclear new build.

b. The IACC (and Grwp Llandrillo Menai/ Welsh Government) has established trust, credibility, and working relationships with senior influential decision makers within Hitachi Ltd. and HGNE Ltd.

c. The IACC has stated its commitment to collaboration and identified its expectations and ambitions to ensure the potential development is a catalyst for positive economic transformation.

d. Hitachi are committed to Anglesey - the 100 year commitment was reiterated by senior individuals.

e. A united 'team Wales' approach has been established to capitalise on the economic and employment benefits not only for Anglesey, but the region and Wales.

f. The IACC has an enhanced appreciation of the importance and commitment of Hitachi Ltd. to the proposed Wylfa Newydd development.

g. The Japanese business culture expects that things will be done right the first time; to the highest quality and standard. Delays are unacceptable.

h. Hitachi Ltd. and HGNE Ltd. have committed to a collaborative approach with local partners to ensure that mutual benefits are achieved from the potential Wylfa Newydd development.


A Transformational Opportunity
変革の機会
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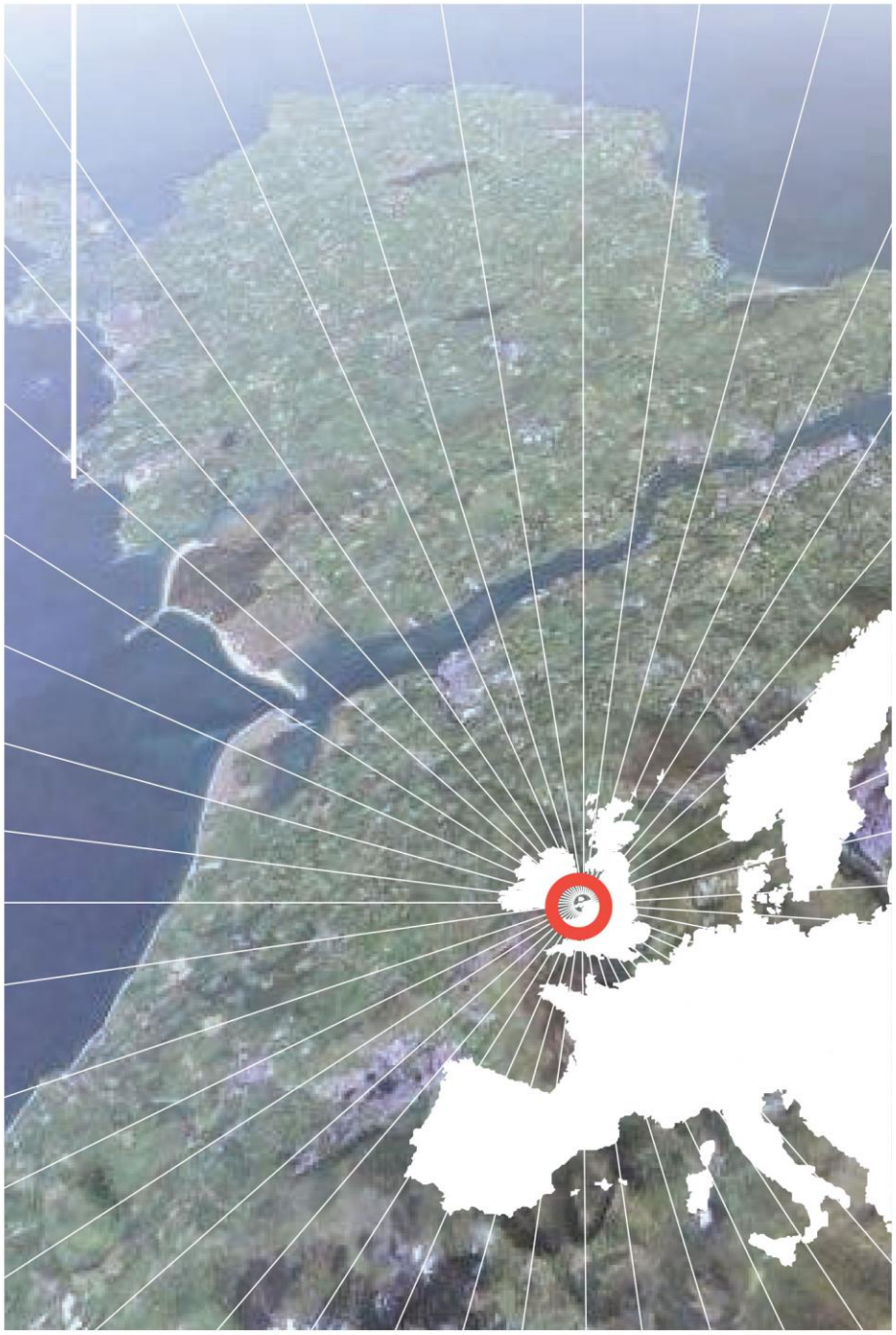

Isle of Anglesey Context

Cyd-destun Ynys Môn

- Located off the North West Coast of Wales, UK;
- 68,000 Population;
- 276 square miles (714 square kilometres);
- Rich landscape, culture and heritage;
- Bilingual.

- Wedi ei lleoli oddi ar Arfordir Gogledd-Orllewinol Cymru, DU;
- Poblogaeth o 68,000
- 276 o filltiroedd sgwâr (714 o gilometrau sgwâr);
- Tirwedd, diwylliant a threftadaeth cyfoethog;
- Dwyieithog.

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Isle of Anglesey - Economy

Economi - Ynys Môn

- Existing Wylfa Nuclear Power Station critical to the economy and will cease generation in December 2015;
- Number of recent closures has led to availability of skilled labour;
- Trend of outmigration capable of being reversed through the job opportunities presented by the Nuclear New Build;
- Enterprise Zone status to attract inward investment and new jobs.

- Mae'r Orsaf Bŵer sydd yn Wylfa ar hyn o bryd yn hollbwysig i'r economi a bydd yn rhoi'r gorau i gynhyrchu ym mis Rhagfyr 2015;
- Mae gweithlu medrus ar gael yn sgîl colli nifer o swyddi yn ddiweddar;
- Gellir gwrthdroi'r patrwm o allfudo trwy'r cyfleon am swyddi fydd yn codi yn sgîl Adeiladu Niwclear Newydd;
- Statws Parth Menter i ddenu mewnfuddsoddiad a swyddi newydd.

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Nuclear Legacy

Etifeddiaeth Niwclear

- Local goodwill and trust through living with safe nuclear generation for 50 years;
- Adaptable and loyal workforce;
- Essential source of local employment and supply chain opportunities;
- Isle of Anglesey County Council represents local interests in the region and with Wales and UK Governments;
- Effective timeline between Trawsfynydd/ Wylfa Decommissioning and Nuclear New Build;

- Ymddiriedaeth ac ewyllys da yn lleol yn sgîl byw gyda chynhyrchu ynni niwclear yn ddiogel am 50 mlynedd;
- Gweithlu teyrngar sy'n gallu addasu;
- Ffynhonnell hanfodol ar gyfer cyflogaeth leol a chyfleon i'r gadwyn gyflenwi;
- Mae Cyngor Sir Ynys Môn yn cynrychioli diddordebau lleol yn y rhanbarth gyda Llywodraethau Cymru a'r DU;
- Llinell amser effeithiol rhwng digomisiynu Wylfa/Trawsfynydd â Adeiladu Niwclear Newydd;

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Why are we here?

Pam ydym yma ?

- Hitachi 100 year commitment to Anglesey;
- Maximise the opportunities from the biggest investment in Wales;
- Outline Team Wales' commitment to ensure that the Horizon and other major developments transform the economy and local communities;

- Ymrwymiad 100 mlynedd gan Hitachi i Ynys Môn;
- Manteisio i'r eithaf ar gyfleon yn sgîl y buddsoddiad mwyaf yng Nghymru;
- Amlinellu ymrwymiad Tîm Cymru i sicrhau bod Horizon a datblygiadau mawr eraill yn trawsnewid yr economi a chymunedau lleol;

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The Isle of Anglesey County Council - Roles

Swyddogaethau – Cyngor Sir Ynys Môn

- Robust & timely planning decisions and consultations;
- Joint working with other regulators;
- Ensure responsibilities in education, highways, housing, community cohesion and environmental health are met;
- Communication and engagement with key stakeholders;
- Promoting competitive skills supply, competitive supply chain and competitive infrastructure on Anglesey;
- Developers and public bodies brought together to present 'one voice' through the Energy Island Programme.

- Ymgynghori a gwneud penderfyniadau cynllunio mewn modd cadarn ac amserol;
- Gweithio ar y cyd gyda rheoleiddwyr eraill;
- Sicrhau cwrdd â chyfrifoldebau yn y meysydd addysg, priffyrdd, tai, cydlyniant cymunedol ac iechyd yr amgylchedd;
- Cyfathrebu ac ymgysylltu gyda chydranddeiliaid allweddol;
- Hyrwyddo cyflenwad o sgiliau cystadleuol, cadwyn gyflenwi gystadleuol ac isadeiledd cystadleuol yn Ynys Môn;
- Dod â datblygwyr a chyrff cyhoeddus ynghyd i siarad ag 'un llais' trwy'r Rhaglen Ynys Ynni.

The Isle of Anglesey - Energy Island Programme

Rhaglen Ynys Ynni –Ynys Môn

Our vision and aspiration is to put Anglesey and North West Wales at the forefront of energy research and development, production and servicing.

A once in a lifetime opportunity to transform the economy and communities of Anglesey and North West Wales.

Workstreams established for key topic areas bringing together developers and public sector organisations. The role is one of:

- De-risking very substantial private sector investment
- Facilitation and co-ordination;
- On-going communication with key stakeholders in raising and realising these potentially life changing ambitions.

Ein gweledigaeth a'n dyhead yw sicrhau bod Ynys Môn a Gogledd-Orllewin Cymru ar flaen y gad yn y maes ynni o ran gwaith ymchwil, datblygu, cynhyrchu a thrin.

Cyfle unwaith mewn oes i drawsnewid yr economi a chymunedau Ynys Môn a Gogledd-Orllewin Cymru.

Sefydlwyd ffrydiau gwaith ar gyfer pynciau allweddol sy'n dod â datblygwyr a sefydliadau sector preifat ynghyd. Mae'r rôl hon yn golygu:

- Dadrisgio buddsoddiad sector preifat sylweddol iawn;
- Hwyluso a chydlynu;
- Cyfathrebu parhaus gyda chydranddeiliaid allweddol i godi a gwireddu'r uchelgeisiau hyn a allai newid bywydau.

Isle of Anglesey - Progress to Date

Cynnydd Ynys Môn - hyd yma

- Early commitment to the nuclear agenda;
- Lobbied UK Government to ensure Wylfa identified as preferred site;
- Facilitated developer site visit in 2008/09;
- Secured Energy Enterprise Zone status;
- Established Energy Island Programme in 2010;
- Political alignment between UK, Welsh and Local Government.

- Ymrwymiad cynnar i'r rhaglen niwclear;
- Wedi lobïo Llywodraeth y DU i sicrhau bod Wylfa yn safle a ffefrir;
- Hwyluso ymweliad â'r safle gan y datblygwr yn 2008/09;
- Wedi sicrhau statws Parth Menter Ynni;
- Wedi sefydlu Rhaglen Ynys Ynni yn 2010;
- Cysondeb gwleidyddol rhwng Llywodraeth y DU, Llywodraeth Cymru a Llywodraeth Leol.

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Local Employment & Skills

Cyflogaeth a Sgiliau Lleol

- 6,000 construction jobs/ 1,000 permanent jobs – we need highest % possible to be filled by local people working for businesses based on Anglesey and North Wales (both existing and inward investors);
- Horizon commitment to work with local partners, college and university to develop training programmes, which will create a strong and permanent base of construction and nuclear skills;
- Isle of Anglesey County Council & partners committed to supporting North Wales businesses which can compete in the supply chain in terms of cost, quality, safety and deliverability;
- Partnership working with National Skills Academy for Nuclear;
- Commitment to the Welsh language – e.g. Hitachi GE bilingual website.

- 6,000 o swyddi adeiladu/1,000 o swyddi parhaol – angen llenwi'r canran uchaf bosib o'r swyddi hyn gyda phobl leol sy'n gweithio i fusnesau yn Ynys Môn a Gogledd Cymru (busnesau cyfredol a mewnfuddsoddwyr);
- Ymrwymiad Horizon i weithio gyda phartneriaid lleol, colegau a'r brifysgol i ddatblygu rhaglenni hyfforddiant, a fydd yn creu sylfaen gref a pharhaol ar gyfer sgiliau adeiladu a niwclear;
- Cyngor Sir Ynys Môn a'i bartneriaid yn ymrwymedig i gefnogi busnesau yng Ngogledd Cymru a fedr gystadlu yn y gadwyn gyflenwi o ran cost, ansawdd, diogelwch a'r gallu i gyflawni.
- Gweithio mewn partneriaeth gyda'r Academi Sgiliau Genedlaethol ar gyfer Niwclear;
- Ymrwymiad i'r Iaith Gymraeg – e.e. gwefan dwyieithog Hitachi GE.

Grwp Llandrillo Menai - Llangefni Campus

Grwp Llandrillo Menai – Campws Llangefni

- Wales' largest, and leading, Further Education Institution
- 3 delivery colleges across North West Wales
- 34,000 students; over 2,000 staff;

Recent development at Coleg Menai Llangefni:

Resource	Built	Size
Heavy Plant Training Centre	2012	3 Hectares
Energy Training Centre (Member of the National Skills Academy – Nuclear; Flagship Status)	2011	2,860 m2 *Gross Floor Area*
Construction Craft Training Centre	2009	4,790m2 *Gross Floor Area*

- Y Sefydliad Addysg Bellach mwyaf yng Nghymru a'r un mwyaf blaenllaw;
- 3 choleg cyflawni ar draws Gogledd-Orllewin Cymru
- 34,000 o fyfyrwyr; dros 2,000 o staff;

Datblygiadau yn Coleg Menai, Llangefni yn ddiweddar:

Adnodd	**Adeiladwyd**	**Maint**
Canolfan Hyfforddi – Peiriannau Trwm	2012	3Hectar
Canolfan Hyfforddiant Ynni (Aelod o'r Academi Sgiliau Genedlaethol – Niwclear; Statws Blaenllaw)	2011	2,860m^2 *Arwynebedd Llawr Gros*
Canolfan Hyfforddi – Crefftau Adeiladu	2009	4,790m^2 *Arwynebedd Llawr Gros*

Grwp Llandrillo Menai

Grwp Llandrillo Menai

CURRENT CURRICULUM OFFER

- Human Performance Training – Error avoidance
- Radiation Protection & Monitoring
- Instrumentation & Control
- Fabrication & Welding
- Civil Engineering
- Construction Craft
- Training approved by the Nuclear Skills Academy

FUTURE POTENTIAL OPPORTUNTIES

- Development of a National Centre for Nuclear Training (public/ private sector partnership)
  - Horizon Engineering Centre of Excellence (£10m)
  - Skills Hub for many partners – serving a range of employers in the energy sector
  - New, high specification and high quality, training
  - New Link Road being designed by WG

Y CYNNIG CWRICWLWM CYFREDOL

- Hyfforddiant Perfformiad Dynol – Osgoi camgymeriadau
- Diogelu Rhag Ymbelydredd a Monitro
- Offerynnau a Rheolaeth
- Gwneuthuriad a Weldio
- Peirianneg Sifil
- Crefftau Adeiladu
- Hyfforddiant a gymeradwywyd gan yr Academi Sgiliau Niwclear

CYFLEON POSIB I'R DYFODOL

- Datblygu Canolfan Genedlaethol ar gyfer Hyfforddiant Niwclear (partneriaeth sector cyhoeddus/preifat)
  - Canolfan Rhagoriaeth Peirianneg Horizon (£10m)
  - Hyb sgiliau ar gyfer llawer o bartneriaid - gwasanaethu ystod o gyflogwyr yn y sector ynni
  - Hyfforddiant manyleb uchel ac o ansawdd uchel newydd
  - Ffordd Gyswllt newydd yn cael ei dylunio gan Lywodraeth Cymru

Isle of Anglesey - Inward Investment

Mewnfuddsoddi – Ynys Môn

- Investing in skills, infrastructure, sites and premises to attract inward investors to Anglesey;
- Scope to internationalise these businesses to win contracts from other Hitachi Nuclear New Build projects.

- Buddsoddi mewn sgiliau, isadeiledd, safleoedd ac adeiladau i ddenu mewnfuddsoddwyr i Ynys Môn;
- Sgôp i ryngwladoli'r busnesau hyn i ennill contractau gan brosiectau Adeiladu Niwclear Newydd Hitachi.

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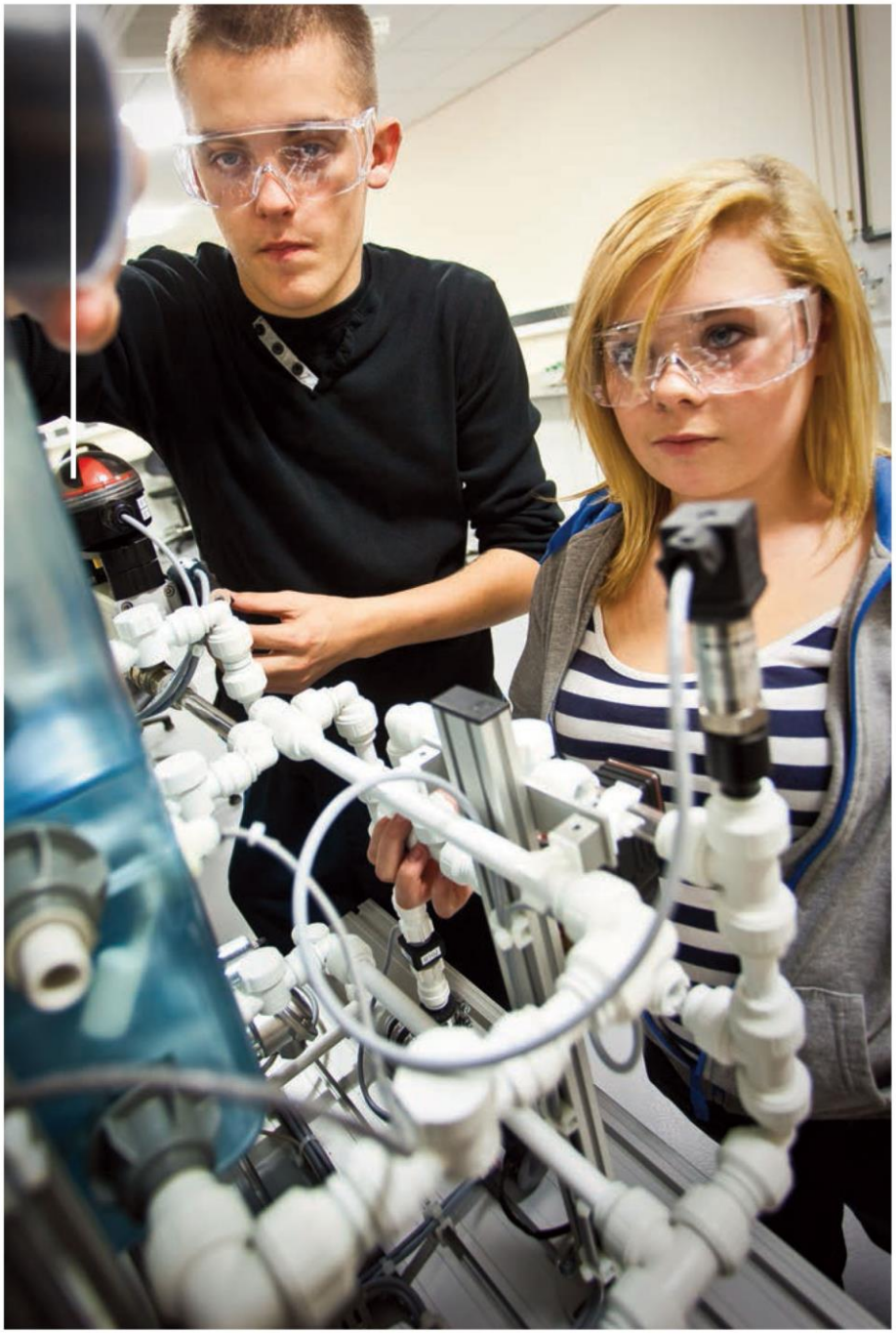

Key Messages

Negeseuon Allweddol

- All about collaboration between Hitachi/ Horizon and Team Wales to realise shared outcomes;
- Calls for early and on-going engagement between parties and sharing of initial information;
- Need for investment by both sides for mutual benefit.

- Yn ymwneud â'r cydweithredu rhwng Hitachi/Horizon a Thîm Cymru i wireddu canlyniadau a rennir;
- Galwadau am ymgysylltiad cynnar a pharhaus rhwng partïon a rhannu gwybodaeth gychwynnol;
- Yr angen am fuddsoddiad gan y ddwy ochr er lles pawb.

Success Criteria

Meini Prawf Llwyddiant

The success of the Horizon Nuclear New Build will be gauged by the people of Anglesey and Wales in terms of:

- Support provided in educating and training its young people to take up job opportunities;
- The number and quality of jobs taken up by local people, including school and college leavers, in both the construction and operation phases;
- Contracts won by local businesses;
- Inward investment to Anglesey
- Proactive approach to dealing with potential impacts on Welsh language, communities and natural and historic landscapes.

Bydd llwyddiant yr Orsaf Niwclear Newydd gan Horizon yn cael ei fesur gan bobl Ynys Môn a Chymru o ran:

- Y cymorth a gafwyd i addysgu a hyfforddi pobl ifanc i fanteisio ar gyfleon am swyddi;
- Nifer ac ansawdd y swyddi a gafodd pobl leol yn ystod y cyfnodau adeiladu a gweithredu, gan gynnwys y rheini sy'n gadael ysgolion a cholegau;
- Contractau a enillwyd gan fusnesau lleol;
- Mewnfuddsoddi yn Ynys Môn;
- Agwedd ragweithiol tuag at ddelio â'r effeithiau posib ar yr Iaith Gymraeg, cymunedau a thirweddau naturiol a hanesyddol.


Thank you
ありがとうございました
Diolch
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CYNGOR SIR YNYS MÔN ISLE OF ANGLESEY COUNTY COUNCIL

YNYS YNNI MÔN ANGLESEY ENERGY ISLAND

Economic & Community Regeneration

Japan Learning Visit – Financial Breakdown

July 2014

Author:
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Energy Island Programme – Delivery Manager
Economic and Community Regeneration

1. Background

1.1 Horizon Nuclear Power (HNP), the developer and operator of the proposed Wylfa newydd is 100% owned by Hitachi of Japan. HNP will be contracting with Hitachi GE (an 80% owned Hitachi subsidiary), to construct the power station. The preparation of the Wylfa site and off-site associated development works will be commissioned by HNP directly.

1.2 As a result Horizon Nuclear Power are eager to foster a relationship between key stakeholders in Wales and Hitachi GE and proposed a site visit to a New Build Nuclear Power Station actually under construction in Japan enabling these stakeholders to get a first-hand insight into construction, procurement and supply chain opportunities associated with the development of an Advanced Boiling Water Reactor.

1.3 Against this backdrop the invited group consisted of a mixed group of officers, politicians and Horizon representatives. The Isle of Anglesey County Council individuals invited by HNP were:

- Cllr. Ieuan Williams (Leader)
- John Idris Jones (Energy Island Programme Director)
- Dylan Williams (Head of Economic & Community Regeneration/ Energy Island Programme)

1.4 Other individuals/ representatives invited by HNP were:

- Albert Owen MP
- Rhun ap Iorweth AM
- Dennis Evans (Chair of Wylfa Newydd Project Liaison Group)
- Ieuan Rees (Coleg Llandrillo Menai)
- Gwenllian Roberts (Welsh Government)

2. Financial Breakdown

2.1 The Isle of Anglesey County Council was responsible for the cost of the above named three individuals. Following receipt of all invoices the final breakdown of cost is outlined below:

Pre Travel Costs	
Business Cards	£222.00
Presentation & Booklet (preparation & printing)	£1,145.00
Corporate Gifts	£132.83
Miscellaneous	£39.03
TOTAL	**£1,538.86**

Travel Costs	
Japan Airlines Flights (Heathrow – Tokyo)	£2,515.95 £329.00 rtn pp = 987.00 Tax/ Surcharge = £1,528.95
Rail Travel (Bangor – Heathrow rtn)	£296.70
Bullet Train – Tokyo – Oma	£720.00
Taxi Fares (Japan)	£11.51
TOTAL	**£3,544.16**

Accommodation & Subsistence	
Meal & Refreshments @ Heathrow	£47.29
Hotel (Tokyo & Mutsu City) inc. Breakfast	£1,432.76
TOTAL	**£1,480.05**

2.2 The total cost of the visit amounts to **£6,563.07**.