

Anglesey Nuclear Workers' Accommodation

A Comparative Assessment of accommodation off-site at Kingsland/Cae Glas and on-site at Wylfa Newydd

Originally Prepared for Land and Lakes Ltd March 2017. Updated November 2018

Regeneris Consulting, Faulkner House, Manchester, M1 4DY
0161 2349910

	Slide
Executive Summary	1
Purpose of this Report	3
Appraisal Considerations	4
The Scale of the Opportunity	5
Broad Location of the Two Sites	6
Population Surrounding the Two Sites	8
Working Aged Population Surrounding the Two Sites	9
Unemployment Surrounding the Two Sites	10
Welsh Index of Multiple Deprivation	11
Facilities Near the Two Sites	12
Essential Anglesey Services	13
Fit With Existing Tourism Strategy	14
Radically Different Legacy Benefits	15
Precedents	16
The Need for Quality Accommodation	17
Conclusions (1)	18
Conclusions (2)	19

Executive Summary

- The development of a bespoke campus for visiting nuclear construction workers represents a big opportunity for Anglesey. This includes 250 on-site jobs and annual off-site worker spend of up-to £15M depending on the facilities available.
- There will be harmful effects if the visiting workforce is not managed properly. Providing the right accommodation, in the right location, is a key part of this management strategy.
- The Kingsland/Cae Glas site is the **optimal location** for the new nuclear worker campus, due to:
 - *Proximity to labour, and economic need.* There are 10,000 working age residents within 5km of the site and some of the highest levels of deprivation in Wales. On-site jobs can be easily accessed by those most in need.
 - *Proximity to facilities.* There are circa 85 restaurant/pub/leisure outlets within 5km of the site that can help maximise off-site spend. The additional revenue and jobs in these outlets will flow to those most in need.
 - *Proximity to essential services.* All of the principal health, public transport and community safety nodes are within 2-5km of the site.
 - It is a *quality product* that will serve to attract and retain nuclear workers in Anglesey, in the face of competition for labour from other big UK infrastructure projects.
 - It helps *protect the current Anglesey tourism sector*, by (i) minimising pressure on existing visitor accommodation (ii) channelling workers down-time into the already built-up areas of Holyhead and away from more sensitive tourism locations.
 - It provides substantial *legacy benefits*, including new permanent local housing of which at least 50% will be affordable, and extension to proposed new flagship Center Parcs style leisure development. The leisure development will create in excess of 500 permanent on and off-site jobs.

Executive Summary (cont)

- If the new nuclear workers campus were to be constructed on-site at Wylfa Newydd then the consequences will be as follows:
 - The take up of on-site jobs would be *dispersed* across the whole Island, placing pressure on the road system and taking the benefits of new jobs away from those who need it most.
 - The very limited eating, drinking and leisure facilities mean that the potential to capture off site discretionary spend in Anglesey is *significantly reduced*.
 - Resources in essential public services (health, crime) will be *drawn away* from the more populated areas and areas which are most in need.
 - Works car based travel will place *substantial pressure on a poorly equipped rural transport infrastructure*.
 - The amenities and services of nearby Cemaes and Amlwch, whose combined population is just over 5,000, will be significantly stretched by the high volume of workers to be accommodated (approximately 3,500).
 - The remote location and highly secure compound at Wylfa will risk driving nuclear workers towards alternative provision and *displace existing tourists* from Anglesey. This runs counter to a central objective of the Anglesey Destination Management Plan.
 - The remote location is a weaker basis for social cohesion between new workers and existing communities. The potential to assimilate is greater in Holyhead where the town is best equipped to deal with the volume of workers and their needs. This is reflected by Holyhead Town Council's active support of the Cae Glas & Kingsland proposal, and the concern shown by local stakeholders in Cemaes and Amlwch over the scale of the Wylfa on-site residential proposal.
 - The ability to deliver a once-in-a-lifetime regeneration legacy, in a target regeneration area, is *foregone*.
 - The strain on smaller local towns and the temporariness of the proposal will result in an effective *cost* to the region.
- The other most advanced nuclear new build proposal in the UK is at Hinkley Point in Somerset. Local planners are placing a premium on worker accommodation sites that are well integrated into existing main settlements, and which deliver legacy benefits.

Purpose of this Report

- A substantial number of nuclear construction workers for Wylfa Newydd (circa 4,000) are required to be housed in bespoke campus-style accommodation.
- Horizon Nuclear Power (HNP) has previously considered the Land & Lakes proposal on land at Kingsland/Cae Glas as the location for the new campus-style accommodation. HNP now seemingly favour locating the new accommodation campus on site at Wylfa Newydd.
- This Regeneris report provides some **contextual data** that should be factored into the decision making process.
- The data in this report provides the basis for a **rounded assessment** of the overall financial, economic and social benefits of each option.

Appraisal Considerations

- When appraising the relative benefits of the proposed sites there are four main considerations, as set out below.
- First, the **capital cost** of constructing the accommodation to the required specification and timescale.
- Second, **logistical issues** of how workers are transported between the accommodation solution and the workplace.
- Third, the **quality of proposed accommodation** and the ability for Horizon to compete for skilled workers at a time when many other UK infrastructure projects are being delivered.
- Fourth, **wider considerations** related to how the accommodation/workers **interact and integrate** with the existing socio-economic base of Anglesey. These wider considerations include:
 - Which communities benefit from the on-site jobs that are created in the worker campus?
 - How is the off-site spend of visiting workers maximised? and which communities benefit from this?
 - How does the location of the accommodation help reduce any additional burdens on Anglesey's key public services?
 - How does the location of the accommodation help integrate and reinforce Anglesey's existing tourism priorities and provide a legacy for future tourism growth?
- **All four factors should be used in appraising the options.** The report focuses largely on the fourth and final factor.

The Scale of the Opportunity

- The precise number of workers to be housed in specialist workers accommodation is still to be finalised, but is likely to be in the region of 3,500 workers.
- The scale of visiting workforce brings with it considerable economic opportunity:
 - On site jobs estimated at circa 250 to service the on-site facilities and clean and maintain the campus.
 - Annual off site expenditure potential of circa £15M. This is based on circa 10% of salary being deployed off-site and will be dependent on the range of facilities available.
- Investment in workers accommodation should also benefit Anglesey in the longer term. Local partners will want to see the capital investment serve an economic/social role after the nuclear new build is complete.

Broad Location of the Two Sites

- The slide over page shows the location of the two locations under consideration.
- **Kingsland and Cae Glas** are located adjacent to the A55 North Wales Expressway and approximately 2km from Anglesey's main town of Holyhead. The additional built up areas of Trearddur Bay and Valley sit to the south and east of the site respectively.
- The site adjacent to **Wylfa Newydd** is located on the more remote northern tip of Anglesey. It is generally surrounded by open farmland. The settlement of Cemaes is located within a 5km radius of the site and contains some limited local services (see later slide).

- Wylfa Newydd site
- Cae Glas & Kingsland site



Population Surrounding the Two Sites

Population (5km): **3,408**
Population (2km): **2,310**

Population (5km): **17,247**
Population (2km): **3,060**

Population by Output Area

- Wylfa Newydd site
- Cae Glas & Kingsland site

Population

Low

High

ONS, Census 2011
Map shows the population density (persons per hectare)

- The map shows the population density (persons per hectare) for each output area with darker shades representing a relatively higher concentration of residents than lighter shades.
- There are **17,247 residents** within 5km of the Cae Glas and Kingsland site. The bulk of this is in the town of Holyhead.
- The population around the Wylfa Newydd site is lower. There are only 2,310 residents within a 2km radius of the site and 3,408 within a 5km radius.
- There are **5 times** more residents within a 5km radius of Kingsland/Cae Glas than Wylfa Newydd.

Working Age Population Surrounding the Two Sites

WAP (5km): 2,014
WAP (2km): 1,373

WAP (5km): 10,595
WAP (2km): 1,697

WAP by Output Area

- Wylfa Newydd Site
- Cae Glas & Kingsland site

Working Age Population

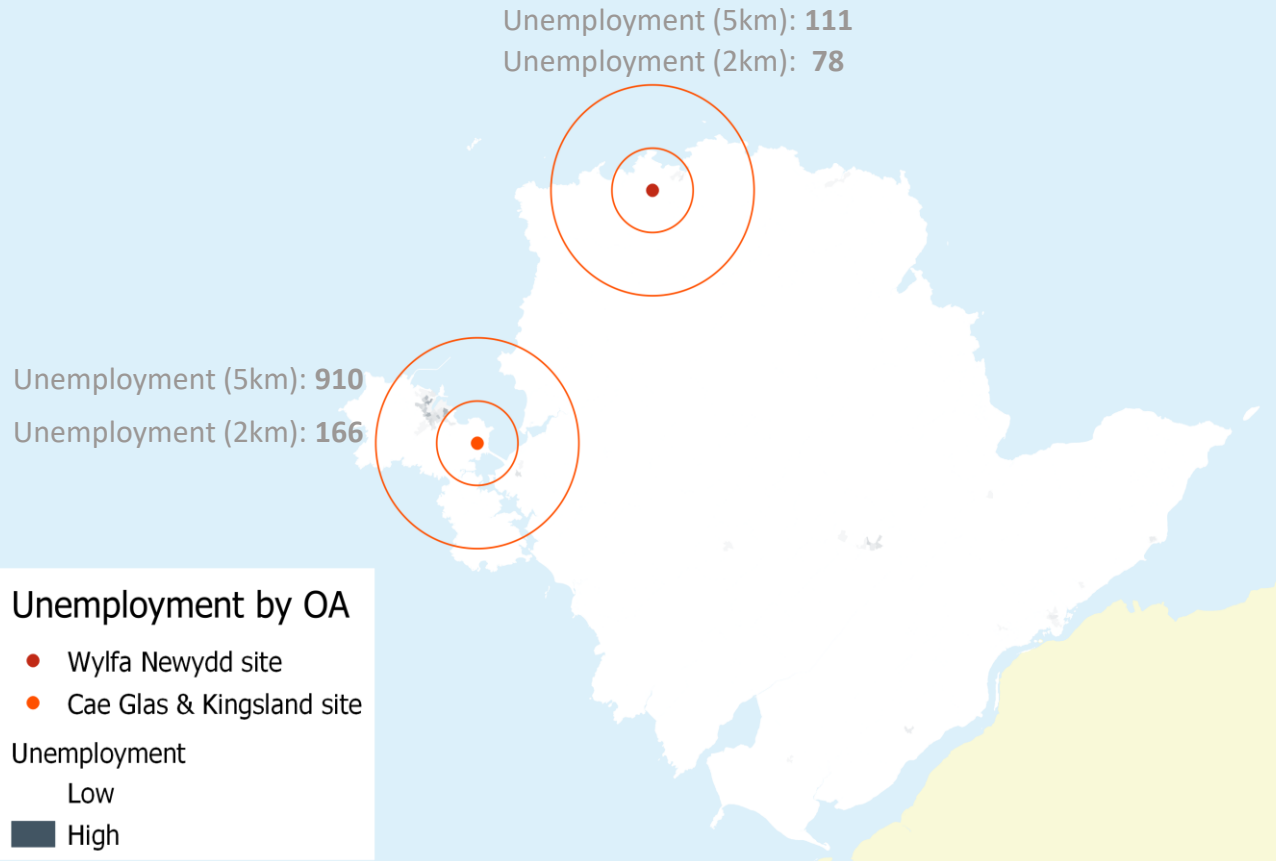
Low

High

- 60% of residents within 5km of both the Cae Glas and Kingsland and Wylfa Newydd sites are working aged (age 16 to 64).
- In volume terms there are **5 times** more working residents within a 5km radius of Kingsland/Cae Glas than Wylfa Newydd.
- This means that the pool of available labour to work on site at the workers campus is substantially greater at Kingsland/Cae Glas.

ONS, Census 2011

Unemployment Surrounding the Two Sites



ONS, Census 2011

- The map shows the unemployment density (unemployed persons per hectare) for each output area. Darker shades representing relatively high concentrations of unemployment.
- In absolute terms, there are over **8 times** as many unemployed residents within 5km of Cae Glas and Kingsland than Wylfa Newydd.
- There are over **2 times** as many unemployed residents in the 2km catchment.
- **8.6%** of working age people within 5km of the Cae Glas and Kingsland site are unemployed, compared to **5.5%** at the Wylfa Newydd site.
- In terms of addressing unemployment the site at Kingsland/Cae Glas offers far more potential.

Welsh Index of Multiple Deprivation

LSOAs within 5km of Cae Glas and Kingsland (Penrhos)	Rank	Percentile	LSOAs within 5km of Wylfa Newydd	Rank	Percentile
W01000033 Morawelon	168	9			
W01000016 Holyhead Town	209	11			
W01000029 London Road	238	12			
W01000036 Porthyfelin 1	268	14			
W01000017 Kingsland	326	17			
W01000030 Maeshyfryd	376	20			
			W01000028: Llannerch-y-medd	640	34
W01000022 Llanfaethlu	721	38	W01000022: Llanfaethlu	721	38
*W01000023 Llanfair-yn-Neubwll 1	873	46	W01000031: Mechell	852	45
*W01000024 Llanfair-yn-Neubwll 2	915	48	W01000021: Llaneilian	969	51
W01000043 Valley 1	954	50	W01000018 Llanbadrig	980	51
W01000037 Porthyfelin 2	1,018	53	W01000004 Amlwch Rural	1126	59
W01000034 Parc a'r Mynydd	1,213	64			
W01000040 Trearddur 2	1,246	65			
W01000039 Trearddur 1	1,312	69			
W01000044 Valley 2	1,739	91			
<p>* Less than 50% of these LSOAs are within their respective 5km radius. Welsh Government, <i>Welsh Index of Multiple Deprivation 2014</i>, Dec 2015</p>					

- The table shows the relative rank of each LSOA within 5km of the Cae Glas & Kingsland and Wylfa Newydd sites, where 1 is the Most Deprived LSOA, and 1,909 is the Least Deprived LSOA.
- There are **six communities** near Kingsland/Cae Glas that are in the top 20% most deprived communities in the whole of Wales.
- By contrast **none** of the communities surrounding Wylfa Newydd fall within the top 20% most deprived Welsh communities.

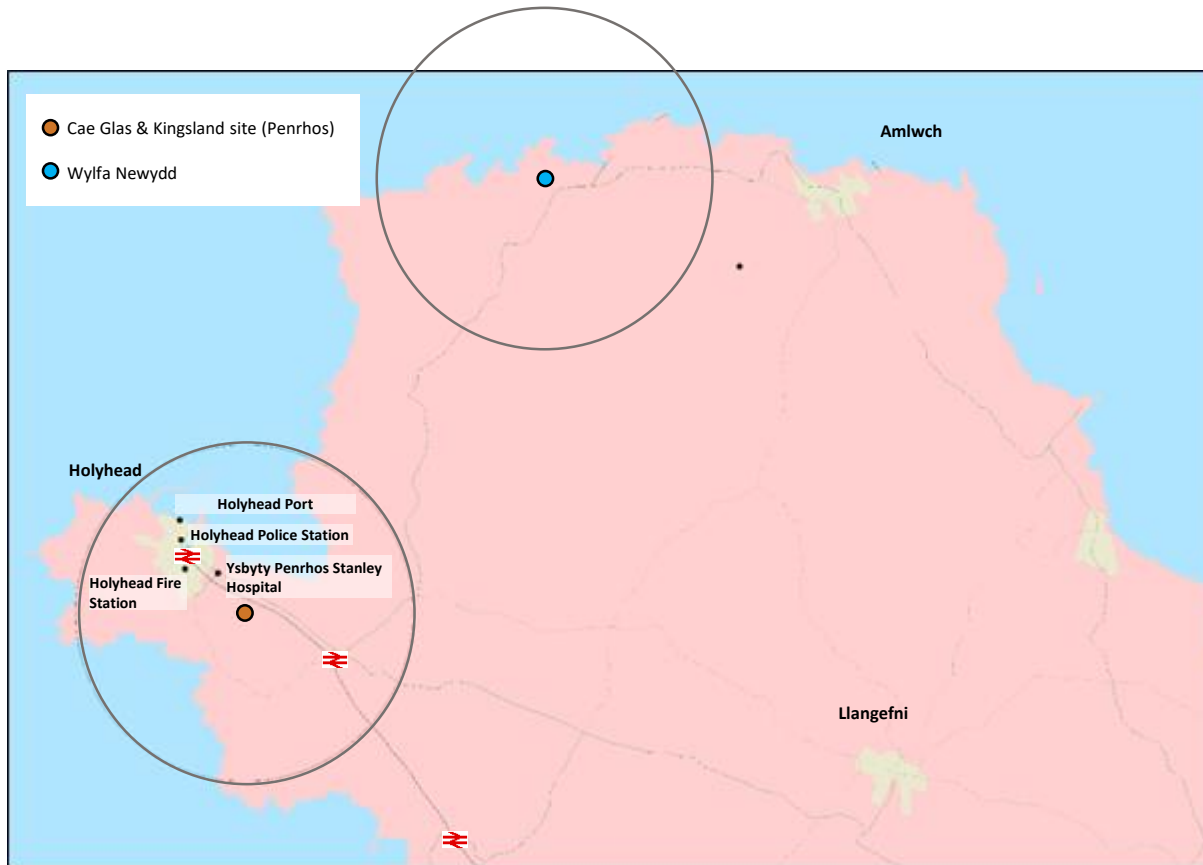
Facilities near the Two Proposed Sites

Type of facility	Cae Glas & Kingsland ≤ 2km	Cae Glas & Kingsland ≤ 5km	Wylfa Newydd ≤ 2km	Wylfa Newydd ≤ 5km
Public houses	2	15	1	1
Restaurants	8	40	0	0
Takeaways	4	14	2	2
Cafes	0	5	0	1
Supermarkets/groceries	2	6	1	3
Cinemas	0	1	0	0
Sports/fitness	1	4	0	0
Total	17	85	2	5

* Less than 50% of these LSOAs are within their respective 5km radius. **Note:** LSOAs in which the two sites are located are highlighted in **bold**.

- The table of facilities has been compiled through a desk based analysis of the local area using online search engines and business directories.
- These are the **facilities that workers will typically want to make use of** in their downtime, accepting that some needs will be met on-site.
- There are **17 key outlets** within 2km of the Kingsland/Cae Glas site and **only 1** within 2km of Wylfa Newydd.
- The numbers increase to 85 and 5 for the 5km radius.

Essential Anglesey Services



- The 5km catchment around the Kingsland/Cae Glas site contains many of the main public services that serve Anglesey. This includes:
 - Holyhead Police Station
 - Holyhead Fire Station
 - X2 Main-line rail stations
 - Port of Holyhead
 - Ysbyty Penrhos Stanley Hospital
- By contrast **none** of Anglesey's main public services are located in the 5km radius of the Wylfa Newydd site.

Fit with Existing Tourism Strategy

- The current Tourism Destination Management Plan provides a powerful introduction to Anglesey's tourism sector...*"From the minute you cross one of those 2 bridges you'll see stunning landscapes, unspoilt coastlines and picturesque towns and villages that are just waiting to be explored"*.
- The DMP also sets an objective to...*"ensure that the proposed large-scale investments such as Wylfa Newydd have close cooperation between everyone involved, ensuring this development can go ahead with minimal disruption to local communities and the tourism economy"*.
- It is crucial that in choosing a site/development specification for workers accommodation clear consideration is given to protecting the natural assets and landscapes on which the Anglesey tourism sector depends. This means:
 - Investing in good quality bespoke accommodation that will genuinely be attractive to visiting workers, and avoid placing pressure on conventional visitor accommodation.
 - Choosing a location that does not put pressure on the road system.
 - Choosing a location that does not place pressure on the facilities and natural assets that bring tourists to Anglesey.

Radically Different Legacy Benefits

Kingsland/Cae Glas

- High quality and energy efficient solution with permanent use
- Site and accommodation re-used afterwards for:
 - Conventional housing for locals
 - Major new Center Parcs style leisure destination
- Housing units improve choice in local housing market
- Leisure destination creates:
 - 465 FTE on-site permanent jobs
 - 110 FTE off-site permanent jobs

Wylfa on-site

- Low value and temporary solution with no proposed after-use
- Site cleared on completion

- The two other most advanced nuclear new build proposals in the UK are at Hinkley Point in Somerset and at Sellafield/Moorside in West Cumbria.
- Local planners in both locations are placing a premium on worker accommodation sites that are well integrated into existing main settlements, and which deliver legacy benefits.
- At Hinkley Point:
 - The Hinkley Point SPD states...*“Reliance on large isolated campus schemes would create concentrations of one type and/or tenure of population that could result in social tensions and negative perceptions of development, which may significantly increase the likelihood of antisocial incidents occurring. Furthermore, development that is not integrated with the locality or communities would not address existing and emerging local policy on regeneration and place making”* (p31)
- At Sellafield/Moorside:
 - The Copeland Local Plan states in relation to new specialist worker accommodation that *“Sites close to...the town centre or neighbourhood centre would be favoured, particularly where there are obvious “legacy” or after-use benefits in terms of conversion to offices, retail or leisure use or for specialist residential such as student accommodation or to provide impetus for a regeneration development site”* (p91)
- We also note that Horizon’s recent reductions in labour forecasts for Wylfa imply significantly fewer jobs than at both Moorside and Hinkley. Horizon’s labour assumptions need testing further.

The Need for Quality Accommodation

- A large number of UK infrastructure projects will be happening in parallel in the 2020s. Horizon will need to compete hard to attract and retain skilled construction workers.
- The retention of specialist and skilled workers is challenging because of their short supply. Furthermore, the challenging nature of work at a new nuclear build project in a peripheral area (distance from family and services) is another obstacle to attracting and retaining workers. Therefore, a quality accommodation offer is an essential component in attracting and retaining skilled workers.
- Recent survey work undertaken by Land & Lakes with Unite members shows:
 - Attrition rate unlikely to be affected by a 30 min commute time.
 - Attrition rate will be affected by ability of staff to integrate into communities and enjoy everyday facilities.
 - Attrition rate will be affected by quality of living accommodation.
- Unite members also recognised the importance of:
 - Construction worker spend as a regeneration lever
 - Legacy benefits that continue after the nuclear construction phase has completed
- The Wylfa site has the potential to deliver two further reactors. These would be built on the proposed site of the temporary accommodation blocks, thus requiring removal of the blocks and the finding of another accommodation solution. Locating the accommodation at Cae Glas & Kingsland avoids complicating the future development of the plant.

Conclusions (1)

	Kingsland/Cae Glas	Wylfa Newydd	Implications
Proximity to Urban Areas	Close to large swathes of existing built up area to the west, south and east of site.	Largely surrounded by farmland/open space. Limited built up areas within 5km radius	<ul style="list-style-type: none"> Development at Wylfa Newydd detached from existing communities. Development at Wylfa Newydd would miss out on potential for interaction.
Working Age Catchment	10,700 working age residents in 5km radius	2,000 working age residents in 5km radius	<ul style="list-style-type: none"> Much bigger pool of available workers to fill on-site jobs within the workers campus.
Unemployment Catchment	900 unemployed residents in 5km catchment	110 unemployed residents in 5km catchment	<ul style="list-style-type: none"> With development at Wylfa Newydd, Anglesey misses out on potential to provide on-site jobs for those unemployed workers most in need.
Proximity to Disadvantage	Six neighbouring communities in top 20% most deprived in Wales	No neighbouring communities in top 20% most deprived in Wales	<ul style="list-style-type: none"> Development at Wylfa Newydd misses major opportunity to provide wealth and opportunity to deprived areas
Proximity to Facilities	17 retail/leisure facilities within 2km of site, 85 within 5km	1 retail/leisure facility within 2km of site, 5 within 5km	<ul style="list-style-type: none"> Opportunities for off site spend greatly diminished at Wylfa Newydd. High risk that overall off-site spend not optimised. Wages leak back out of Anglesey.

Conclusions (2)

	Kingsland/Cae Glas	Wylfa Newydd	Implications
Proximity to Services	Many of Anglesey's main public services located in 5km radius (inc police, hospital, main line rail)	No significant public services in 5km radius	<ul style="list-style-type: none"> Visiting workforce based at Wylfa Newydd will place additional stresses on public services and draw resources away from areas most in need
Fit with Existing Tourism Strategies	Designed as a first class worker campus, ensuring that existing tourists are not displaced.	Remote location and secure accommodation in temporary blocks will drive nuclear workers towards alternative provision. Location places pressure on Anglesey's natural assets	<ul style="list-style-type: none"> Lower cost development at Wylfa Newydd will put existing tourism accommodation and tourism infrastructure under pressure. Triggers cycle of tourism decline.
Housing & Tourism Legacy Benefits	New local housing with at least 50% affordable, plus extension to major new flagship leisure destination.	No proposed after-use. Site demolished.	<ul style="list-style-type: none"> Only Kingsland/Cae Glas that delivers legacy benefit and allows step change in quality of tourism product.
Precedents of Integration	Numerous examples of planning authorities placing a premium on (i) integration with existing communities and (ii) securing legacy benefits from worker campus. This model now seen as best practice.		<ul style="list-style-type: none"> Development at Kingsland/Cae Glas will allow Anglesey CC to follow best in class approach to planning for major infrastructure
The Need for Quality Accommodation	Good quality accommodation provided in permanent houses, holiday lodges	Budget, high density accommodation	<ul style="list-style-type: none"> Horizon/Anglesey will need to compete with rest of UK for specialist construction workers. Kingsland/Cae Glas will provide the more attractive setting that will attract and retain workers.

Quantifiable Difference

Some of the factors listed earlier can be quantified:

- We estimate the Cae Glas/Kingsland option will encourage workers to engage with, and spend more in, the local economy. Our estimate is that this additional on and off-site expenditure could yield in the region of **+200 jobs** per annum compared to the Wylfa Newydd option.
- There will, we estimate, be circa **+250 more legacy jobs** at Cae Glas/Kingsland compared with the on-site option. This is derived from the legacy uses proposed for the Cae Glas site.

The Added Value of the Cae Glas / Kingsland Nuclear Housing Solution		
Source of Added Value	Quantification ¹	
	Jobs (FTE)	GVA per annum (£m)
✓ More local worker expenditure in retail/leisure sectors	+150	+£6M
✓ Enhanced pool of operational staff	+50	+£2M
✓ Distributional benefits of jobs flowing to target communities	-	-
✓ Less crowding out of existing tourism trips	-	-
✓ More legacy jobs and affordable housing benefits	+250	+£10M
✓ Less damage on transport and local public services	-	-

¹ Note : All figures are over and above the on-site proposal. All assumptions are provided on the following slide.

Quantifiable Difference (assumptions)

Assumptions

- | | |
|-----------------------------------|---|
| ✓ More local expenditure off-site | <ul style="list-style-type: none"> Assumes that circa 3,500 workers spend £20 more each week off site due to the proximity of Kingsland/Cae Glas to local services compared to Wylfa Newydd. This figure could be higher in practice. Equates to additional retail/leisure turnover each year of £3.6M. Assumes 75% of this retail/leisure turnover flows to wages, and that average FTE salary of £18,000. Assumes GVA per worker in retail sector of £40,000. |
| ✓ More on-site operational staff | <ul style="list-style-type: none"> Assumes that via a seemingly wider range of on site services for nuclear sector workers the on-site job count is +50 higher for Kingsland/Cae Glas than for Wylfa Newydd. On site services at Cae Glas include numerous sports, food and leisure facilities for workers. On site services at Wylfa Newydd appear less significant. Assumes GVA per worker in relevant sectors of £40,000. |
| ✓ More legacy jobs | <ul style="list-style-type: none"> Based on the 2012 Regeneris Economic Impact assessment on the whole Penrhos/Cae Glas leisure legacy project. This 2012 report estimated ongoing job creation of 465 jobs in total – approximately 250 of which would be located on the Cae Glas site. Assumes GVA per worker in relevant sectors of £40,000. |



Regeneris Consulting, Faulkner House, Manchester, M1 4DY. 0161 2349910

Regeneris Consulting employs 45 economists from offices in Manchester and London. We have provided economic impact analysis and economic evidence to both public and private sector clients for the last 20 years. We provide economic appraisal services to various parts of UK government (Homes England, Local Enterprise Partnerships, Local Authorities) and are regularly asked to provide expert witness inputs at planning inquiries and local plan examinations.