

# KINGSLAND AND CAE GLAS: PROJECT DELIVERY SUMMARY PAPER

Land and Lakes, Anglesey

DECEMBER 2018



## VERSION CONTROL

Version	Date	Author	Checker	Approver	Changes
Final	03/12/18	Paul Hodgkiss	Paul Haniak	Jonathan Moore	

---

---

This report dated 03 December 2018 has been prepared for Land and Lakes (the "Client") in accordance with the terms and conditions of appointment dated 18 October 2018(the "Appointment") between the Client and Arcadis for the purposes specified in the Appointment. For avoidance of doubt, no other person(s) may use or rely upon this report or its contents, and Arcadis accepts no responsibility for any such use or reliance thereon by any other third party. 18 October 2018

# 1 Executive Summary

Arcadis have conducted a review of the work undertaken by Land and Lakes (L&L) with regards to the proposed development of Kingsland and Cae Glas, Anglesey, to provide workers accommodation in support of the Nuclear Power Station project at Wylfa.

Our review concludes that the plans and measures L&L have in place are robust and appropriately developed at this stage of the project to deliver the proposed development of worker accommodation (3500 beds), in conjunction with the associated amenity buildings (Hubs), Coach Terminals and Infrastructure to support such a development.

It has also been demonstrated that L&L can deliver the proposed scheme within the required time constraints of the Nuclear Power Station project, assuming Final Investment Decision (FID) Q1 2020, accommodation would be required by Q2 2022.

The proposed scheme will provide practical efficient accommodation, recreational and social amenities for the workers in a location that provides benefit for the local community of Anglesey. Its proximity to Holyhead with its rail and ferry terminals in conjunction to its links to the main access road the A55 and the mainland allows the accommodation sites to buffer the transport logistics of workers travelling to the remote construction site at Wylfa and coordinate the transport volumes through the provided coach transfers.

As part of the review Arcadis have provided an order of cost for the development which L&L have confirmed meets with their budget aspirations to deliver the fully serviced provision based on the NAECI subsistence rates over a 5-year full occupancy programme.

Post construction phase at Wylfa, the developments at Kingsland and Cae Glas will be converted from workers accommodation to open market / affordable housing and holiday accommodation respectively. The site layout, design of the modules, and infrastructure of both sites ensure this transition can be conducted with the least modifications, ensuring a sustainable and long-lasting legacy for Anglesey.

## 2 Location

Horizon critique at PAC3 Transporting workers to the Wylfa Newydd Development Area adds significant additional cost, which is less commercially viable; the resultant impact in terms of National Agreement for the Engineering Construction Industry (NAECI) allowances was further added to the lack of viability of the proposals. Together with the transportation of workers, this would be increasing the cost of the Wylfa Newydd Project from approximately £25m to £30m per 1,000 workers;

Since the assertion of £25m to £30m Horizon have revised their shift patterns, therefore in order to respond to Horizons statement on cost we need to:

Firstly, to understand what impacts the revised shift patterns have on these figures.

Secondly to see how Horizon built up these costs, for us to understand what has been considered, the source and rates applied. For example, the NAECI rates aren't mandatory and local labour agreements can be agreed between parties.

We seek further information on this in order that we can take an informed view on their claims on the impact on viability.

We would therefore seek full disclosure of the build up to provide the £25m to £30m per 1000 workers to include clarity on the following points:

1. Security sequence timing, en route or arrival / departure from Wylfa
2. Security costs, linked to 1) above - how has this been costed?
3. What shifts have been assumed for the workers and therefore what is the effective timescales being used as the calculator of time/cost
4. Nuclear industry work rate, per worker and what has been used to reflect actual labour mix

### 3 Outline Planning Consent

Horizon critique at PAC3: The consented masterplan does not provide for the size and scale of amenities that would be required for effective operation as a campus for the proposed number of workers. The proposed hub building indicated on the master plan is a sufficient size to provide for some amenities, but it is neither large enough nor does it provide the requisite uses. In addition, insufficient areas allocated for delivery and other services that would be necessary; the result is that it is likely that the site cannot accommodate as many workers as suggested in the outline consent;

Very significant amendments to the consented scheme would therefore be required which would be likely to require a fresh consent. This would require significant work and time to correct, which is complicated further by the fact that Horizon does not own the site

L&L are the only organisation that have a deliverable, Planning consented scheme to provide workers accommodation in Anglesey.

The application was considered by the Isle of Anglesey County Council (IACC) in accordance with its authority under the TOWN AND COUNTRY PLANNING ACT 1990 and permission was granted on the 19/04/16.

The permission includes:

**Cae Glas:** Up to 315 lodges; A Central hub building providing reception and canteen ancillary to accommodation; A Park and Ride facility comprising up to 700 car parking spaces; A new hotel; A lakeside hub comprising restaurant, café, retail and bar; New grass football pitch and cricket pitch;

**Kingsland:** Up to 320 new houses to be initially used as temporary construction workers accommodation.

A key consideration to the delivery of the Cae Glas and Kingsland sites was the planning stipulation that either Cae Glas was developed first or that both be developed concurrently. The delivery programme and cost plan take account of this.

The current proposed scheme is in keeping with this consent. L&L have scheduled out all the conditions and where required have already satisfied or undertaken works to satisfy pre-commencement conditions.

Provision is made in the master programme to develop the design detail and satisfy further conditions prior to construction commencing. This will be covered under the submission of a reserved matters application.

L&L will continue to discharge the construction phase conditions with the cooperation of their main contractor.

A full new application will not be required.

### 4 S106

The section 106 agreement was entered into by L&L, Aluminium Metals Limited and IACC dated 18 April 2016. The agreement split the conditions placed on L&L into 7 categories; A – Upon Ownership, B – Within 6 Months, C – At Least 9 Months from Ownership, D - 12 Months Prior to Construction, E – Prior to Commencement – General, F – Prior to Commencement – Phase Specific, G – Prior to Completion of Phase

Our review of the S106 finds L&L have a detailed action plan and credible programme to ensure all conditions are discharged within the key milestone dates in the Master Programme.

## 5 Surveys and Site Assessment to Date

L&L have established a detailed understanding of their Kingsland and Cae Glas sites, with an extensive library of reports including Topographical Surveys, Ground Conditions, Archaeology and Ecology. These reports have informed the outline planning permission and subsequently have been used by L&L to discharge the associated planning conditions. In terms of Land Remediation and Ecology these works are ongoing in full consultation with the statutory authorities and their delivery is detailed in the master programme.

## 6 Infrastructure and Services

Horizon critique at PAC3 : The consented scheme does not include the necessary requirements for worker accommodation, including the necessary power requirements and transport infrastructure. For instance, the scheme does not include a bus terminus or other infrastructure requirements, which would reduce the level of bed spaces that could actually be delivered; and

Both sites are greenfield sites, therefore L&L gave early consideration to the existing site services which would impact on the development. They also established what services they would require to operate the 2 sites and confirmed the location, capacity and feasibility of securing these services.

Through appointed specialists and direct liaison with Statutory providers such as DCWW, L&L have confirmed:

- Site Access to both sites linking to existing infrastructure with direct links to A55
- Services to be diverted (including electric and water)
- Services to be provided (including electricity, gas, communications and water)
- Drainage to both sites including surface water, and foul drainage to Holyhead Wastewater Treatment Works

The location of these services, scope of works required to secure the appropriate capacity and cost estimates are established and integrated into the master programme.

On funding confirmation these works would be instructed as part of an enabling package.

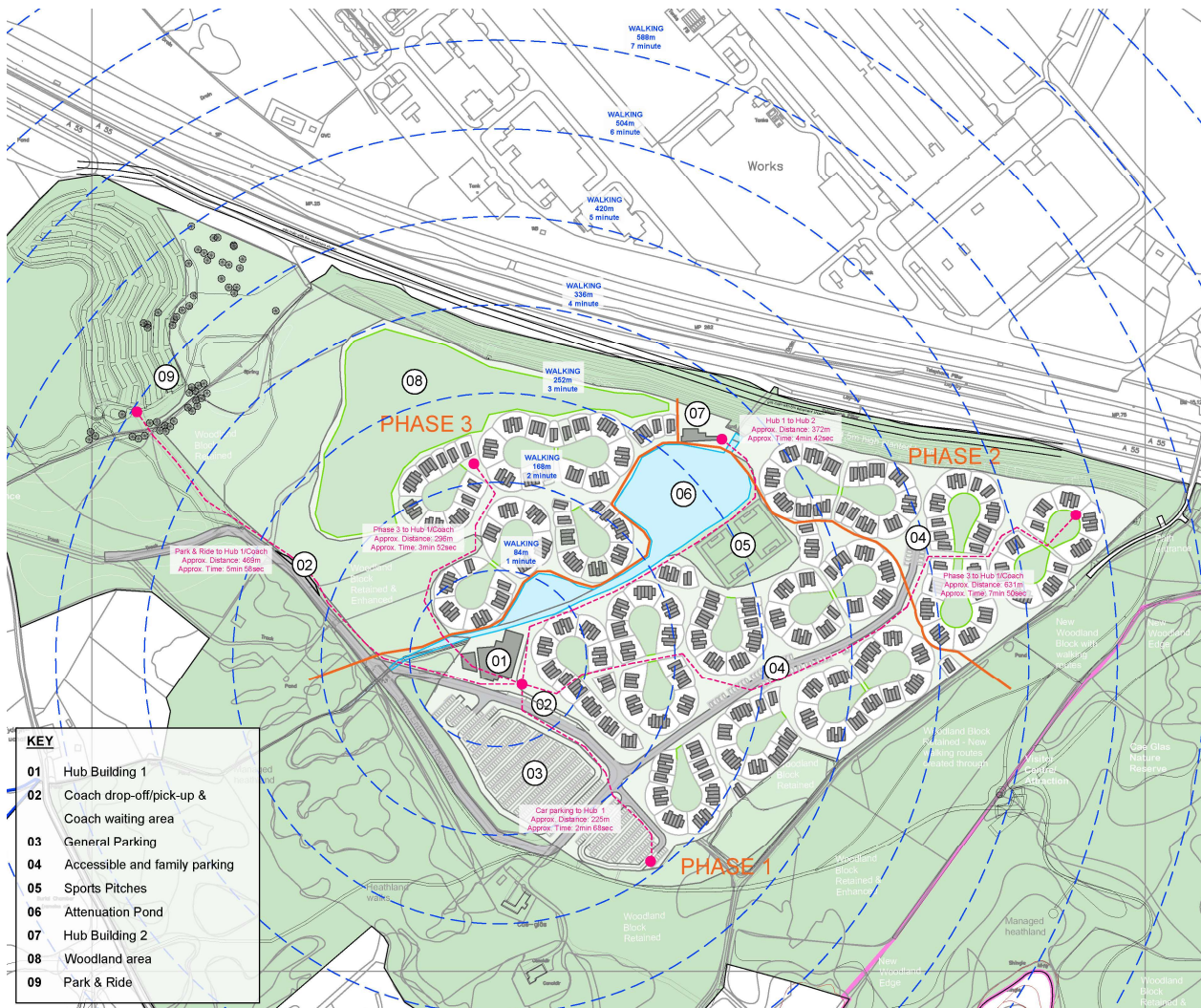
## 7 Current Design

The design has evolved from the Outline Planning proposal but remains within the conditions set.

Horizon critique at PAC3 : Following review, it is considered unlikely that the site can provide for the target number of 1,500 worker bed spaces within the site using the chosen form of housing (suitable for post operational use) and at the same time provide for the requisite operational amenities and other infrastructure. In order to achieve the upper target numbers the house forms require closer spacing and more units than shown on the consented schemes and would result in a very dense layout, which may not be acceptable in urban design or commercial terms.

A full scale review and parametric modelling assessment was carried out by Arcadis and can confirm that the current proposal will provide in excess of 3500 workers beds and associated infrastructure and operational amenities they include:

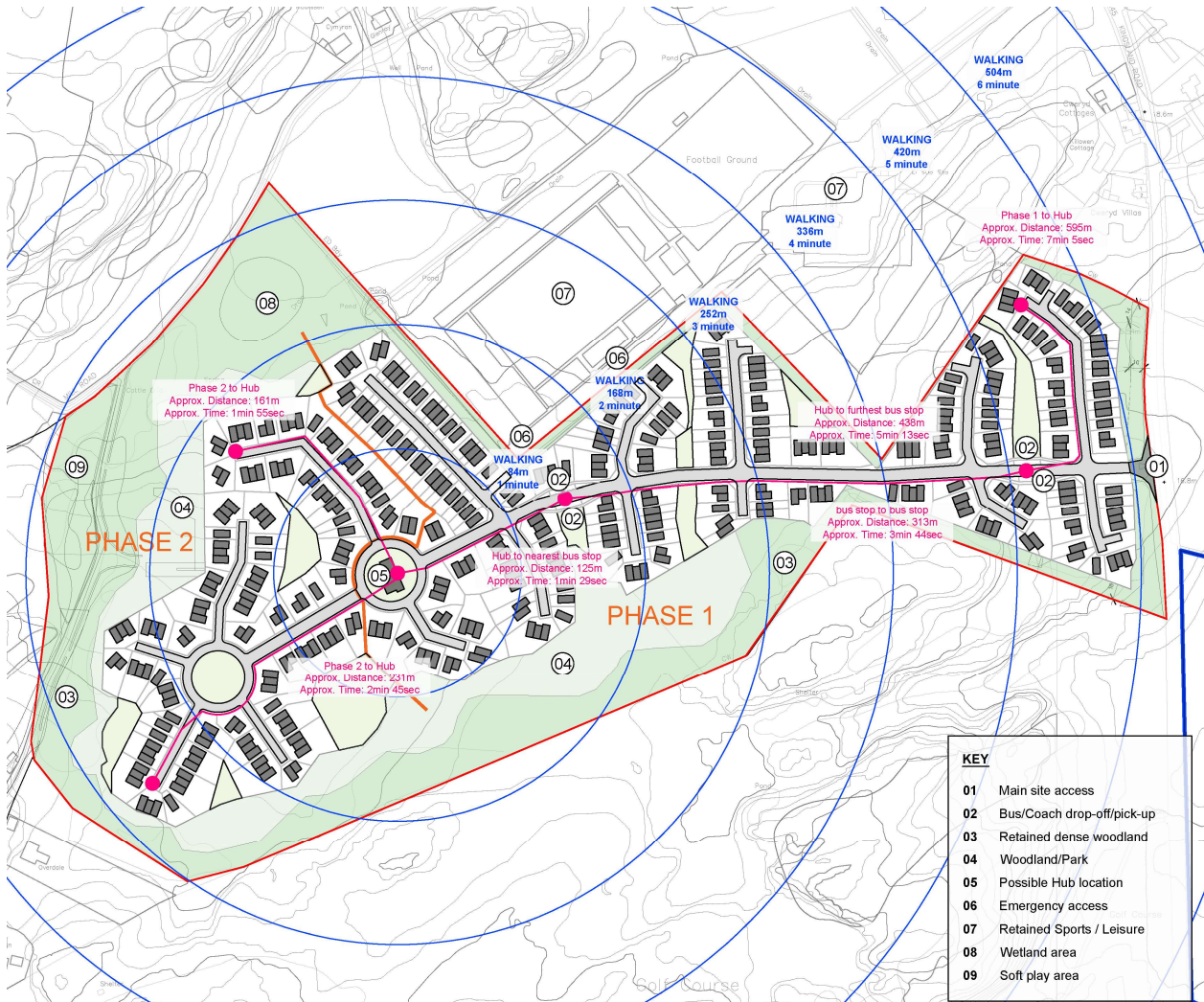
**Cae Glas** Phase 1 - 141 lodges 993 workers beds, Phase 2 - 74 Lodges 502 workers beds Phase 3 - 76 Lodges 518 workers beds, total 291 lodges 2013 Workers Beds, 2 Hub Buildings locating welfare, catering and retail facilities, Car Parking, Bus terminal and capacity for rotation of buses at peak shift times, Parkland recreation areas.





## Kingsland

Phase 1 220 Units providing 1000 workers beds, Phase 2 99 Units providing 502 workers beds, total of 319 Units and 1502 Workers Beds, 1 Hub Building welfare, catering and retail facilities, Car Parking, Bus terminal and capacity for rotation of buses at peak shift times, Adjacent to community Leisure Centre and Sports pitches.



Horizon critique at PAC3 The proposed legacy use and Horizon use of the site are not complimentary, with the provision of over-sized units that would not meet local housing need after they are no longer required by workers;

Horizon critique at PAC3 The proposed legacy and Horizon use of the site are not complimentary, with the provision of tourist lodges not meeting the needs of workers;

Arcadis working with L&L has developed the outline design through Parametric Design Modelling. The Model considers the agreed outline planning permission and planning conditions but looks to optimise layouts and space within these constraints. This enabled Arcadis to confirm the layout and number of houses and lodges.

The modelling incorporates actual modular designs which have been developed with Modular manufacturers to maximise space within the standard modular package sizes. This design solution provides the optimum workers bed spaces. Arcadis then remodelled the layout to ensure the modules could be easily adapted post

worker accommodation to open market/ affordable housing and Cae Glas to be adopted to holiday accommodation.

The result a powerful legacy for the Isle of Anglesey post construction phase in terms of accommodation and tourism offer maintaining the employment needs created during the Nuclear Power Station construction operations.

**Horizon critique at PAC3 The consented scheme does not include the necessary requirements for worker accommodation, including the necessary power requirements and transport infrastructure. For instance, the scheme does not include a bus terminus or other infrastructure requirements, which would reduce the level of bed spaces that could actually be delivered;**

**There is no provision for a bus terminus and bus parking on the consented masterplan**

Kingsland and Cae Glas are both designed to accommodate bus terminals to facilitate the efficient movement of workers. The design includes areas set aside for coaches queuing and multiple embarkment points adjacent to the infrastructure Hubs. The terminals are located within a maximum 5 minute walking distance from the workers accommodation. In addition to providing a link to the Wylfra construction site they will also provide a link between Kingsland and Cae Glas.

The Infrastructure Hubs will provide the catering and retail offer to the workers and will be provided on both sites.

Due to the close proximity of the two sites and the transport links, L&L are able to provide a more flexible and diverse recreational offer than a single “behind the wire” accommodation site, for example the existing leisure centre at Kingsland, the new sports pitches at Cae Glas and the 3 new catering and retail Hubs to be provided, have the potential to be “themed” and provide additional benefits to the workers with regard to work life balance on fixed shift patterns.

These facilities have no impact on the workers bed spaces provided and the Arcadis model demonstrates further bed space could be made available within the consented outline if required.

**Horizon critique at PAC3 : The proposed road layouts shown on the consented master plan are meandering tracks. These are inherently unsuitable for well trafficked roads with a high propensity of pedestrians;**

In the Kingsland development the road layout and car parking has been designed with parking adjacent to the workers lodges. The roads and roundabouts providing open and easy access for the coach transfer services. The parametric modelling has provided a most efficient Masterplan layout that minimises worker walking distances to the Hub facilities.

This layout is consistent with the post construction, open market/affordable housing provision allowing residents parking adjacent to their homes.

The road layout for the Cae Glas development has been designed to support the large movement of coaches servicing the site from the terminal located at the main Hub, and also to facilitate car movement into and out of the sites’ 631 space car park. It will also service the Park and Ride facility. The design is such that vehicle routes are distinct and separate to the pedestrian (car free) routes to which workers can access the accommodation lodges, Hubs and transport links. This maximises the benefits of the green layout. The parametric modelling has provided a most efficient Masterplan layout that minimises worker walking distances to the Hub facilities.

This layout is consistent with Cae Glas future use as holiday accommodation with pedestrian and safe play areas segregated from cars and car parking.

Both sites give easy public transport access from Holyhead rail station, coach station and ferry terminals and private transport via the A55.

The proximity to Holyhead provides additional recreational facilities to the workers with beaches, walks, restaurants, cafes and bars in keeping with an international trade port.



## 8 Order of Cost

Arcadis have provided an order of cost estimate for the two development schemes proposed by L&L at Kingsland and Cae Glas. This order of cost estimate has been developed utilising information provided by L&L and our own knowledge of comparable build costs and modular building off site. Our order of cost has been based on the latest site layout drawings produced by Arcadis which provided the splits for the phases.

Included within the costs are the costs for providing the dwellings and lodges in a modular form. Arcadis have had initial conversations with a modular supplier and the costs included in the order of cost have been based on target costs advised by them.

All the costs are based on current day costs with inflation excluded.

These costs were presented to L&L who confirmed they were within their Project budget aspirations to deliver the fully serviced provision based on the NAECI subsistence rates over a 5-year full occupancy programme.

## 9 Procurement

In the period leading up to the formal funding approval L&L will ensure the design brief, scope of works and consultant appointments are in place. On funding approval, the existing design team will develop the stage 2 plans to stage 3 design for Competitive Tender.

It is anticipated that this contract will be let to a Main Contractor under a single stage design and build contract.

In addition to the Main Contractors L&L have already engaged with, Arcadis to review the current market and provide a tender list of contractors of suitable size and expertise to deliver the infrastructure element of the scheme and manage the specialist modular provider under a single tendered contract to ensure competitive pricing.

During the design development we will also continue to engage with the modular manufacturers to ensure appropriate production and assembly capacities align with our delivery programme.

## 10 Programme

In undertaking its review of the scheme and understanding the critical path delivery tasks Arcadis has built up a delivery programme taking into consideration Ecology, Land remediation, Services diversions and disconnections, securing of capacity, Planning and S106 Conditions, site set up, installation of roads and infrastructure to the formation of the modular bases, production capacities of the modular companies and the assembly durations connections. This detailed programming identifies that a commencement of Stage 3 on 23/04/18 will facilitate the availability of 3000 workers beds by April 2022 (Notional 2 years after FID assumed to be April 20 for programming purposes).

Key Milestone Table taken from the Master Delivery Programme

<b>Kingsland and Cae Glas Key Milestone Dates</b>	
<b>(Based on Design commencing 23/04/19)</b>	
<b>Milestone</b>	<b>Date</b>
DCO Process Completes	23/04/2019
Validation of DCO Process (Notional 6 Month Period)	15/10/2019
FID (allow notional 6 Month challenge Period)	22/04/2020
Horizon Accommodation Requirement (Notional 2 years after FID)	11/04/2022
<b>Land and Lakes Delivery of 3500 Workers Beds</b>	
Design Briefs and Appointments	22/04/2019
Tender Issue	14/01/2020
Detailed Planning Consent	24/03/2020
Contract Award	04/06/2020
Cae Glass Phase 1 - 141 Units- 980 Beds	18/10/2021
Cae Glass Phase 2 - 74 Units - 502 Beds	10/11/2021
Cae Glass Phase 3 - 76 Units - 518 Beds	10/04/2022
Kingsland Phase 1 - 220 Units - 1000 Beds	18/11/2021
Kingsland Phase 2 - 99 Units 500 Beds	23/02/2022
Practical Completion	30/04/2022

## 11 Strategic Delivery Partner

L&L has brought Arcadis in as their Strategic Delivery Partner.

In advance of our agreement to become a partner, Arcadis undertook a review which has confirmed:

<b>The site and its constraints</b>	L&L have a full understanding of the site and works required to facilitate the development of it,
<b>Planning</b>	L&L have an Outline Permission consistent with the current scheme and a programme which incorporates a Reserved Matters application and determination.
<b>S106</b>	L&L have a detailed action plan to discharge the conditions and meet critical delivery milestones.
<b>Infrastructure</b>	L&L have confirmed the location, capacity and availability of the infrastructure and services to deliver the propose scheme

<b>Design</b>	L&L have developed a design compliant with the existing planning permission to deliver over 3500 workers beds with due consideration to the Legacy conversion post operational use.
<b>Programme</b>	L&L have a detailed and robust Master programme to deliver the scheme within the 2-year period following FID.
<b>Cost</b>	L&L can deliver the proposed scheme within their budget aspirations to deliver the fully serviced provision based on NAECI subsistence rates over a 5-year full occupancy programme

Arcadis, through their review of the proposed scheme and the work carried out to date, are confident in the viability of the delivery of the scheme.

Going forward Arcadis will bring their regional, national and international expertise, resources and experience in major complex project delivery to support L&L in the successful delivery of this scheme.