Statement of Economic Impacts

for the Curraghinalt Gold Project, County Tyrone, Northern Ireland

October 2017

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Contents

Executive Summary

The Curraghinalt Project, developed by Dalradian Gold Ltd (DGL), will be a new commercial gold mine operating in Northern Ireland (NI); the first on this scale in the UK for 20 years[1]. Located in Owenkillew ward[2], County Tyrone, in NI, the Project will be the largest Foreign Direct Investment in Northern Ireland in recent years[3]. The Project will have a positive benefit on the local and NI (Regional[4]) economy, helping the Northern Ireland Executive significantly towards its long-held economic aspirations.

DGL will extract and export £146 million worth of gold and silver a year at peak output. This is seven times the export value of all agriculture, forestry and fishing exports (combined) from NI each year – reducing the Regional trade deficit by 2.4%.

The Curraghinalt Project will create at least 350 skilled, high-wage operational jobs - and up to 270 more during construction. The majority of these jobs will go to Northern Irish residents – and many residents of Owenkillew ward. Curraghinalt will provide an excellent, high wage job offer to the many young people who currently leave the area and NI each year[5] seeking better economic prospects elsewhere.

DGL will invest a total of £160 million pre-production and invest a total of £331 million in capital and sustaining capital over the full 20 year life of the mine and 5 year decommissioning[6].

This will stimulate local supply chains; DGL will buy products and services locally wherever possible. For every 10 operational jobs created at Curraghinalt, more than 13 additional jobs will be created elsewhere in the economy (including locally to the site) through spending and supply chain effects.

DGL will continue their ongoing support community projects aimed at creating educational, social, health, environmental and other benefits for local residents. They will also pay local and Regional taxes and National Insurance. The value of these effects is summarised in Table E.1 and Table E.2 below.

At a local, Regional and National level this is a good news story – one that will help government and policy makers at every level to meet their aspirations for the economy and their residents. There are five key ambitions that are relevant to the Curraghinalt Project and that run throughout local, Regional and National Government policy:

- Creating Jobs;
- Upskilling the labour force;
- Rebalancing the Regional Economy;
- Boosting exports and growing a globally competitive economy; and
- Supporting the community.

The Project will have a substantial and lasting effect on delivery of each and every one of these ambitions.

The mine is expected to have a life of at least 20 years (expected to be 25 years), during which time it will transform the local economy, bring lasting benefits to residents and generate significant macro-economic effects for NI. This will be the largest investment in NI in recent years. There are no other current opportunities that will have the scale of positive effects that the Curraghinalt Project will have; this is a rare opportunity for the NI economy, and a once in a generation opportunity for this community.

A summary of both the one-off construction and the annual operational economic impacts of the Curraghinalt Project is set out in the tables below (figures have been rounded). These figures are explained in more detail throughout this Report.

Table E.1 Summary of Construction Effects

Construction	Total Impact Over c.2 year construction period
Total pre-production investment	£160m
Supply Chain spending (including. contingency)	£121.6m
Staff Costs	£38.5m
Employment	
Direct jobs (1 year jobs)	500
Multiplier effects: additional 1 year jobs	900
TOTAL (1 year)	1,400
Employment multiplier*	2.8
GVA	
Direct	£64m
Multiplier effects: additional GVA	£48m
TOTAL	£112m
Output Multiplier**	1.74
Tax	**£14.4m**

* The employment multiplier is the ratio of direct plus indirect (plus induced if Type II multipliers are used) employment changes to the direct employment change. This is a Type II multiplier, including induced effects.

** The output multiplier is expressed as the ratio of direct and indirect (and induced if Type II multipliers are used) output changes to the direct output change due to a unit increase in final demand. This is a Type II multiplier, including induced effects.

Table E.2 Summary of Operational Effects

Operation	Average Annual Impact every year over 20+ years
Sales price per ounce (oz)	£1,042
Total annual costs	£66m
Of which supply chain spending	*£49m*
Of which staff costs	*£16m*
Employment	
Direct Employment (average annual FTE)	350
Multiplier effects: additional jobs	620
TOTAL employment	1,010
Employment multiplier*	2.6
GVA	
Direct	£133m
Multiplier effects: additional GVA	£23m
TOTAL GVA	£156m
Output Multiplier**	1.17
Tax	£15.4m
Exports	£183m
Reduction in NI trade deficit	2.4%

* The employment multiplier is the ratio of direct plus indirect (plus induced if Type II multipliers are used) employment changes to the direct employment change. This is a Type II multiplier, including induced effects.

** The output multiplier is expressed as the ratio of direct and indirect (and induced if Type II multipliers are used) output changes to the direct output change due to a unit increase in final demand. This is a Type II multiplier, including induced effects.

Table E.3 Summary of Project Effects

Project Summary	**Total effect**
Total sales (gold)	3.5million oz
Total sales (silver)	850,000 oz
Total Capital investment (total initial Capex and sustaining Capex investment and decommissioning costs over 25 years, discounted at 3.5% p.a.)	£359m
Total Revenue (total Revenue over 25 years, discounted at 3.5% p.a.)	£2.637bn
Total Profit (revenue less expenditure over 25 years, discounted at 3.5% p.a.)	£1.306bn
Direct Person Years of Employment	8,040
Indirect Person years of employment supported	10,980
Employment multiplier	2.6
Direct GVA (total forecast GVA over 25 years, discounted at 3.5% p.a.)	£1.692bn
Multiplier effects: additional GVA (total forecast GVA over 25 years, discounted at 3.5% p.a.)	£435m
TOTAL GVA (total forecast GVA over 25 years, discounted at 3.5% p.a.)	£2.127bn
Output Multiplier	1.26
Tax (total forecast tax payments over 25 years, discounted at 3.5% p.a.)	£207m
Exports (total export revenue over 25 years, discounted at 3.5% p.a.)	£2.470bn

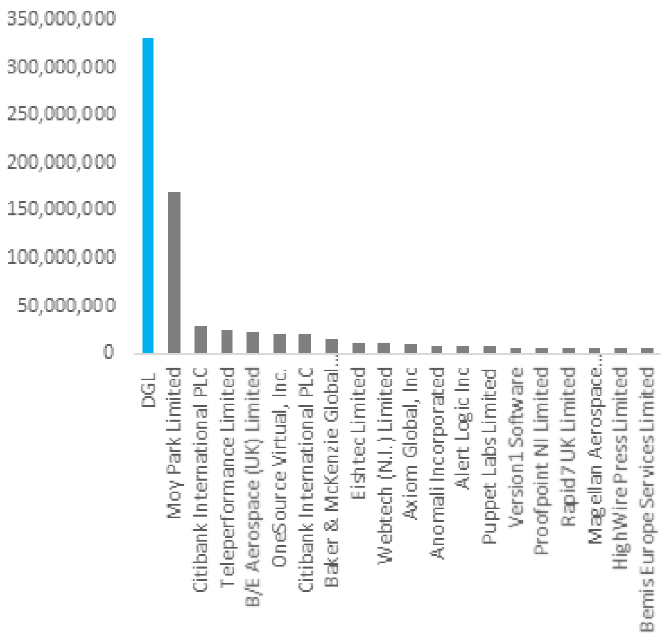
1. Introduction

1.1 A Regionally Significant Investment

1.1.1 Following exploration in the 1980s, DGL acquired the project in 2009 and has now committed the £160 million of funds required to deliver the fully operational mine. This is in addition to the £62 million already invested. This will be the largest single investment in NI in the last 5 years. Including sustaining capital over the 20 year life of the mine, DGL will invest a total of £331 million[7].

1.1.2 After an 18-24 month construction period, the mine will be operational for at least 20 years, with a 5 year decommissioning period; during which time it will generate exports, taxes, employment and supply chain effects that rank amongst the largest investments Northern Ireland has seen in recent years.

Figure 1.1. Investment: DGL in context Capital Expenditure of top 20 projects brokered by Invest NI (2011-2017)



1.1.3 The NI Government recognises the significance of the Project and has designated it as a *Regionally Significant Planning Application*[8]. The significance of these projects is such that The Minister for Infrastructure (NI) is the final decision maker on these Planning Applications, with local planning authorities acting as a consultee.

1.2 Meeting Government Aspirations

1.2.1 The NI Executive has recently published its Draft Programme for Government for consultation (October 2016). This document restates the structural and economic challenges that have been facing Northern Ireland for decades and have been the subject of many policies and initiatives. The Programme for Government sets out ambitious targets and commitments to ultimately overcome these challenges.

1.2.2 These commitments are intended to be long term (beyond a single Executive or Assembly mandate) and will tackle problems by setting specific objectives that are measurable and achievable. Central to all of the commitments in the Programme for Government is the notion of "individual, economic and societal wellbeing". That means tackling the root causes of unemployment, poor skills, inequality, poor health and actively promoting investment, sustainability, creativity and innovation[9].

1.2.3 DGL fully welcomes and supports these policies. DGL supports the direction set out by the Northern Ireland Executive and welcomes the new approach which focuses on outcomes. The Curraghinalt Project will have a significant impact on a range of the outcomes set by the Executive:

- DGL will contribute to prosperous, strong, competitive, Regionally balanced economy;
- DGL will protect the environment and encourage sustainable practices by its employees and contractors;
- Through adherence to all relevant legislation and guidance, through training opportunities and by paying above average wages, DGL will contribute to a more equal society;
- Through training programmes, investment in people and in capital, DGL will ensure that it contributes to an innovative, creative society, where people can fulfil their potential;
- DGL will provide more people with good jobs;
- DGL will support their community and environment, locally and Regionally, to ensure it is a place where people want to live and work and to visit and invest.

1.2.4 DGL submitted representations to the Executive in December 2016 setting out how the Project would make a substantial and lasting contribution to these objectives. This Report sets out in more detail how the proposals will contribute, with a specific focus on the economic effects.

1.3 The Proposals

1.3.1 The Project includes the Underground Mine as well as many ancillary structures that will process the extracted materials; store waste rock; provide administrative support facilities and storage; store and treat water; and improve road access.

- The Curraghinalt Project will include the following main phases:
- A construction phase of up to 24 months;
- An operational phase of at least 20 years - producing 3.5 million ounces of gold over this period; and
- A closure and a post-closure monitoring phase, where remediation works will take place.

1.3.2 Further detail on the proposals is set out in the Planning Statement that accompanies the Application.

1.4 This Report

1.4.1 This Report sets out Quod’s assessment of the economic impacts of the Project. It presents the proposals and their potential effects in the local and NI context, weighing the outcomes against policy aspirations at all levels. It sets out how DGL has already – and will continue to - put in place initiatives to maximise the benefit of the Curraghinalt Project for residents and businesses. It comprises five sections, with supporting information included in appendices.

1.4.2 The **methodology** follows standard economic appraisal techniques and has been shaped by conversations with NI Department for the Economy officials (although the calculations and conclusions herein are Quod's own and Quod accepts responsibility for them accordingly.)

1.4.3 The section entitled **Curraghinalt: Setting and Context** sets out the baseline situation locally and Regionally. Outmigration of young people, economic inactivity, low wages, public sector dependence and an ageing population are concerns. Farming is a major employer, and farms here have low levels of productivity for NI. Low wages and underemployment in the agriculture sector are common.

1.4.4 The policy aspirations of local and Regional Government reflect these challenges; they consistently refer to the need to create jobs, increase skills, rebalance the economy, promote competitiveness and ensure growth benefits the community. The Curraghinalt Project will create opportunities to deliver on all of these aspirations. As set out above, the Programme for Government sets out an ambitious, outcomes-led approach to tackling some of NI's most intractable challenges – a Programme that DGL fully supports.

1.4.5 The **Construction Impacts and Operational Impacts** sections detail how the Project will deliver these benefits through jobs, exports, supply chain benefits, skills and training, tax revenue and community benefits. These benefits will be on a scale rarely seen for a single project in NI.

1.4.6 The section on **Potential Related Effects** acknowledges that a project of this scale in an environmentally sensitive area, with homes nearby, may have some indirect effects – both positive and negative. It demonstrates the mitigation and initiatives that DGL will put in place to reduce any harm or perception of harm and to maximise benefits.

1.4.7 The section on **Community Benefits** sets out how DGL will continue to actively engage with its community and partners in the education, social, health and environmental sectors to ensure the project has lasting benefits.

1.4.8 The final section, **DGL's Contribution to the Programme for Government**, summarises how DGL's investment, its proposals and its commitments will ensure the project has a strong and lasting legacy of contribution to the NI Executive's aspirations and towards tackling its most challenging problems.

1.4.9 Three Appendices set out Key Assumptions and Methodology, the Workforce Skill Profile and Sensitivity Tests (potential effects of a fall or rise in the price of gold).

1.4.10 This Report accompanies the Planning Application for the Curraghinalt Project and sits alongside the suite of Planning Application documents that collectively demonstrate how the proposed scheme complies with planning policy. A detailed technical assessment of the social and economic attributes of the Project from an Environmental Impact Assessment point of view has also been undertaken and is included within the Environmental Statement.

2. Curraghinalt: Setting & Context

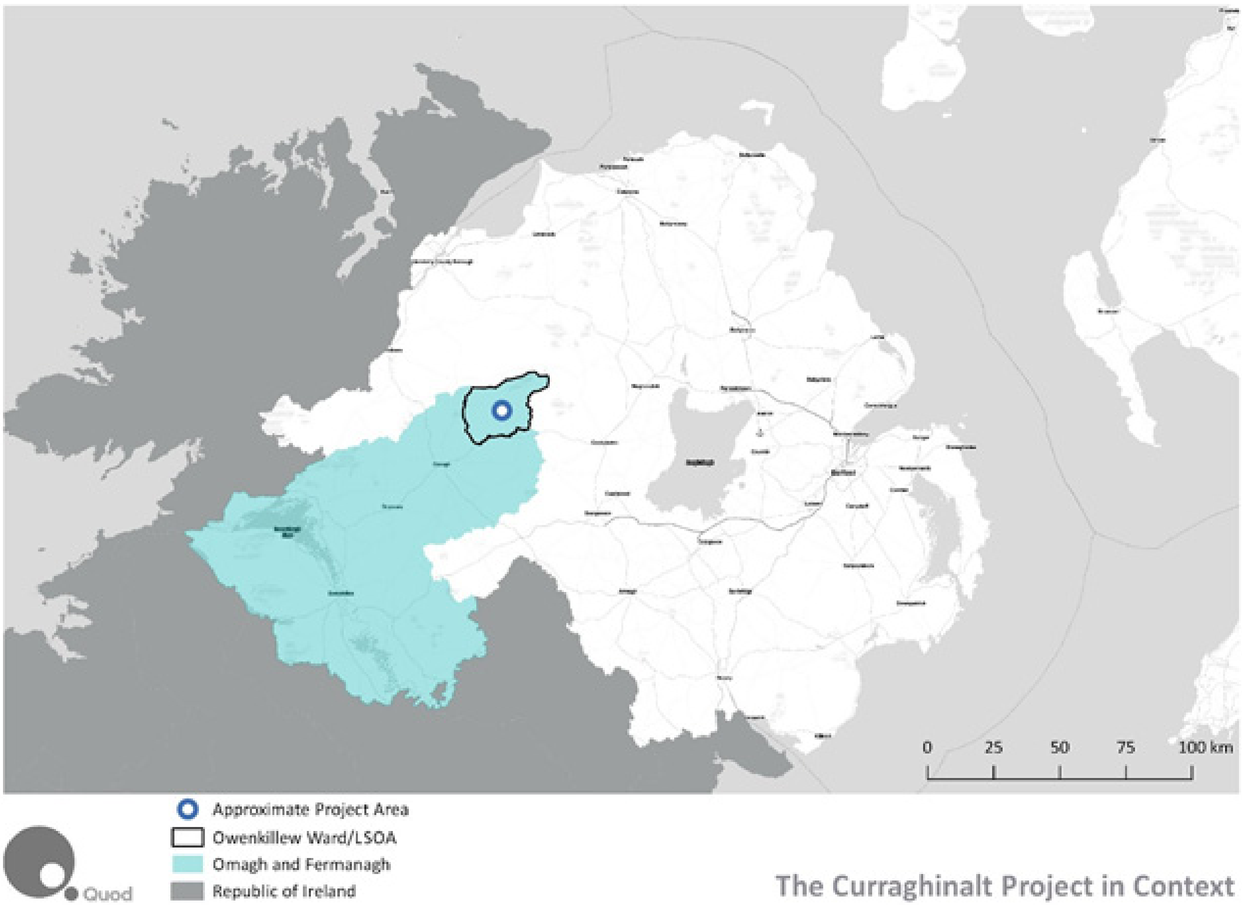
2.1 Setting

2.1.1 The Curraghinalt Project is located in Owenkillew ward, on the southern edge of the Sperrin Mountains which are sparsely populated and rural. Owenkillew Ward[10] is in the northernmost corner of the Fermanagh and Omagh Local Government District (known as Fermanagh and Omagh District Council, FODC). It is located within the southern extent of the Sperrins Area of Outstanding Natural Beauty (AONB); although the area around the site is not one of the main locations for Sperrin's tourism. Surrounding uses are mainly agricultural and residential, with some small scale community uses and local services provided in the nearby villages of Greencastle, Rousky and Gortin.

2.1.2 The nearest towns are Omagh (c. 18.8 km to the southwest), Strabane (c. 25.5 km to the northwest) and Cookstown (c. 25.5 km to the southeast). These towns act as the principal service, retail and education centres for the wider Sperrins area.

2.1.3 There are approximately 2,350 people who live in Owenkillew ward[11] ; this equates to 0.13 people per hectare which is well below

Figure 2.1: Context



the average for Northern Ireland (1.28), the average for the FODC (0.45) and even the surrounding super output areas (0.28). There are 168 homes within 2km of the Project housing around 530 residents. For the Environmental Impact Assessment, Quod has undertaken a detailed assessment of all homes, businesses and land uses within 2km of the Curraghinalt Project[12] ; this can be found in the Socio-Economic Baseline Study as an Appendix of the Environmental Statement. The majority of local residents live in Greencastle and along the Crockanboy Road, not in immediate proximity to the Site.

2.1.4 Owenkillew ward has a slightly higher proportion of young people than the NI average, but outmigration of young people to other parts of NI, the Republic of Ireland, Great Britain (GB) and abroad is still a significant local concern. As across the UK, the over 65's are increasing as a percentage of the population – a trend which will continue - and which threatens the sustainability of rural areas in particular.

2.2 Policy Overview

2.2.1 The Council and NI Assembly's policies recognise NI's social and economic challenges - alongside opportunities for growth – and they have set ambitious targets accordingly.

2.2.2 Policy aims to address a number of well-known weaknesses in the region including underemployment and relatively low wages, and the fact that a substantial proportion of jobs are dependent on the public sector which is facing ongoing cuts. In addition, an ageing population and out-migration of young people threaten long term sustainability and growth has been stagnant in recent years as NI has found it relatively hard to recover from the recession.

2.2.3 These challenges are not new for NI. These policies reflect long-standing challenges that previous administrations and policies have failed to tackle adequately.

2.2.4 The Programme for Government has been published with a view to tackling these issues once and for all, with a focus on an "outcomes based approach" – looking directly at how policy affects communities; their prosperity, health and happiness.

2.2.5 In response to these challenges, there are five key ambitions that run throughout local, Regional and National Government policy. These are:

- Creating Jobs;
- Upskilling the labour force;
- Rebalancing the Regional Economy;
- Boosting exports and growing a globally competitive economy; and
- Supporting the community.

2.2.6 The Curraghinalt Project will help deliver each of these ambitions in different ways. The background to each is addressed in turn below.

"The countryside offers opportunities in terms of the potential for growth in new sectors […] its attractiveness as a place to invest, live and work, and its role as a reservoir of natural resources […]."

- FODC Local Plan Preferred Options 2016, para 5.4

2.3 Creating More & Better Jobs

2.3.1 Governments and stakeholders at all levels want to create more and better paid jobs.

2.3.2 In its Programme for Government (consultation document)[13], the NI Executive has set out 14 key targets. Many of these targets relate to economic growth and improved access to employment, resulting in better quality of life, health and equality. Two stand out for the Curraghinalt Project:

- Target 1: We prosper through a strong, competitive and Regionally balanced economy; and
- Target 6: We have more people working in better jobs.

2.3.3 Access to a well-paid job is important in combating poverty and to build successful communities. Jobs bring benefits to both individuals and communities, increasing levels of health, confidence, self-respect and social inclusion[14].

2.3.4 FODC wants to create a "dynamic" workforce, tackle disadvantage and reduce long-term unemployment, which is a significant problem in the district. They want to help facilitate the creation of 4,875 new jobs by 2030[15]. Overall, the NI Executive hopes to support the growth of 80,000 new jobs across NI by 2030, stimulated by growth in the private sector output of 35%[16]. 1 in 5 Owenkillew ward residents works in the public sector - and a third of people do across NI. These jobs are vulnerable to cuts.

2.3.5 FODC has committed to promote diversity in the range of jobs in the District and support a more productive local economy. It should be thriving, connected and outward looking[17]. FODC recognises that mineral extraction forms a significant contribution to the local economy, providing raw material and creating employment[18].

2.3.6 Underemployment is a significant concern in NI. Agricultural jobs often do not require full time employees but other local jobs are not available. More than half of local residents work in the agricultural sector[19].

2.3.7 The *Strategic Planning Policy Statement (SPPS)* for Northern Ireland recognises the importance of large scale capital projects for employment creation; it states that, *"Large scale investment proposals with job creation potential should be given particular priority.*

"Fermanagh & Omagh District Council aspires to having an economy that will be strengthened and will grow through embracing new technologies [and] encouraging investment in higher paying industries [...]."

- Local Plan Preferred Options 2016, para 4.2

[...] Economic growth can also contribute to higher social standards and improve the health and well-being of our society overall[20].” A focus of the NI Executive is to strengthen job creation through Foreign Direct Investment (FDI) – which supports skilled, productive and highly paid jobs[21].

2.3.8 New jobs should also bring social benefits. The Better Jobs Index is used by the Northern Ireland Executive to measure growth in the quality as well the quantity of new jobs. The index captures dimensions of employment such as a decent income, job security, work-life balance, satisfying work, autonomy and participation, and decent working conditions (including sick pay, holiday pay etc.). Monitoring this Index will help ensure that increased employment is also accompanied by increased quality of life.

2.4 Upskilling the Labour Force and Reducing Economic Inactivity

2.4.1 One of the five Pillars of Growth in the NI Industrial Strategy is the need to “enhance education, skills and employability[22].” At a macro level in NI, demand for skills currently outstrips supply, with the shortage most acute at mid-tier levels, and in the areas of science, technology, engineering and mathematics[23].

2.4.2 Whilst NI is moving in the right direction, the NI skills profile remains behind many Organisation for Economic Co-operation and Development (OECD) and European Union countries, particularly in terms of the high proportions of residents with low or no qualifications. Skills development is essential to ensuring global competitiveness and ensuring that benefits of growth are distributed throughout the labour market.

2.4.3 The NI Executive recognises the value of inward investment – and the importance of skills to attract and retain it. Northern Ireland’s *Competitiveness Scorecard* shows that success will be measured in:

- increased rates of Science, Technology, Engineering and Mathematics (STEM) qualifications;
- investment in skills by foreign investors ;
- improved skills profile of the population as a whole;
- an increased proportion moving into employment or on to further study; and
- reduced economic inactivity, especially in more deprived communities.

2.4.4 The level of education in Owenkillew ward is generally on par with the wider District and Regional averages; around a third of people have no formal qualifications (the rate across NI is 29%). However, only 1 in 5 working age residents has a degree, compared to nearly 1 in 4 across NI.

2.4.5 Lower skills in the labour market mean lower productivity, higher unemployment, underemployment and economic inactivity, less diversity in the labour market and lower earnings.

2.4.6 Earnings are, on average, significantly lower in FODC: £19,700 per year against an average across NI of £21,000. The UK average is higher still at £23,100[24] as shown in Figure 2.2 below

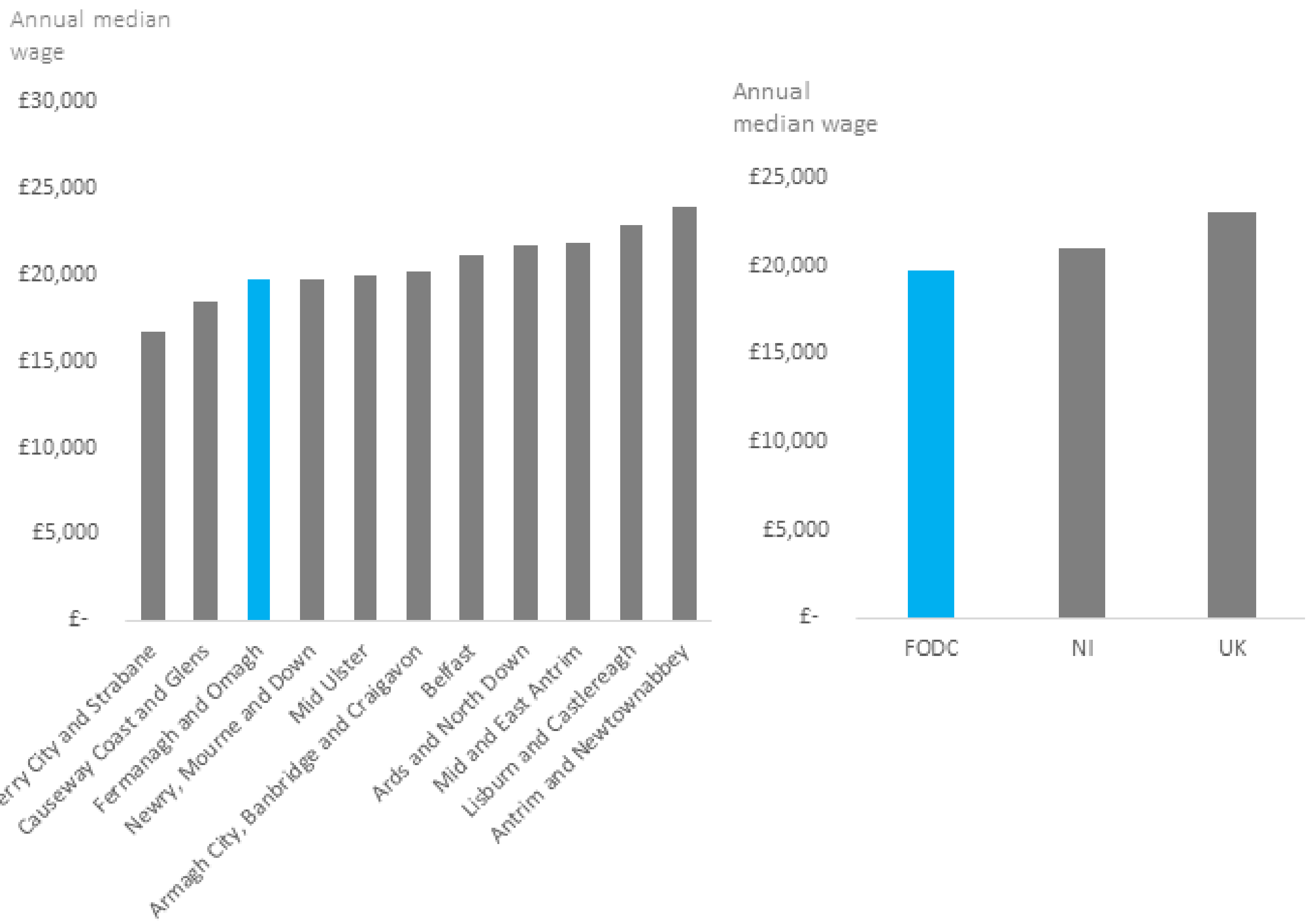
2.4.7 Agriculture in this area is significantly less productive than the NI average. The average Standard Output per farm in Owenkillew ward in 2015 was €26,780 compared to the Northern Ireland average of €74,860[25] as shown on Figure 2.3. This is likely because many of the landholdings here are small and regularly subdivided. There are c. 930 residents dependent on farm employment in Owenkillew ward – and there is limited scope for agricultural employment or productivity to increase substantially in this area.

There is a need to diversify the overall sectoral composition of the FODC area's economy, improve skills levels and attract and retain highly skilled workers.

- Local Plan Preferred Options 2016, para 7.8

Figure 2.2: Wage Comparisons

FODC residents earn less than most other NI districts - and NI lags behind the UK

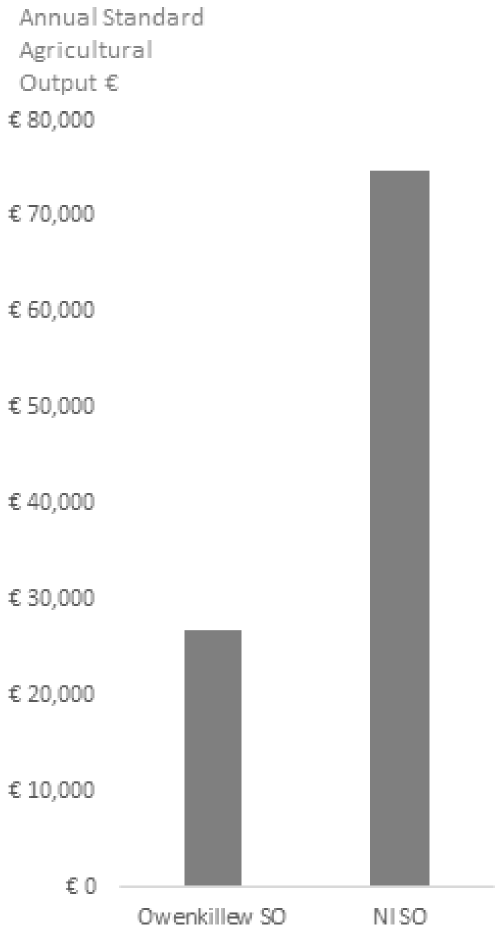


2.4.8 Whilst unemployment is not high in FODC compared to the NI average, long-term unemployment and economic inactivity is a significant local policy concern due to the impacts is has on quality of life and long term prospects. For many decades, NI has experienced a consistently high rate of economic inactivity in comparison to other Regions of the UK. 26% of all working age NI residents are economically inactive - compared to a UK average of 22%[26]. At the last Census, 37% of residents were inactive in Owenkillew ward. That means that 800 working age residents of Owenkillew ward are economically inactive. A further c. 100 are unemployed.

2.4.9 Economically inactive residents will include discouraged workers, who might return to the workforce if suitable local employment was available. Jobs at the right wage level in particular, provide incentive. It is vitally important that those who are inactive can share fully in the economic transformation on which NI has set its sights - so that growth benefits everyone[27]. The Government has set the target of a "stable and competitive employment rate in Northern Ireland which exceeds the United Kingdom average by 2030 and an interim target of more than 70% by 2020 ."

2.4.10 Tackling worklessness in young people is key in order to prevent long-term unemployment and inactivity. This means actively supporting NEETs[29] into work. This will require, amongst other things, support for post-school young people to follow modern apprenticeships and higher level skills training to meet the needs of emerging industries, which FODC is committing to do[30].

Figure 2.3: Annual Standard Agricultural Output € in Owenkillew and NI



There are fewer jobs in the district than there used to be. Forecasts suggest this will continue.

-FODC Community Plan Consultation Document p. 34

2.4.11 Key to the growth of the NI economy is a strong STEM skills base[31] - all skills which relate to mining. Regional Colleges are the cornerstone of training in Northern Ireland[32]. DGL is already engaged with South West College, providing curriculum support, internships and bursaries for students. More detail about this is set out in the Community Benefits section.

2.5 Rebalancing the Regional economy

2.5.1 Across the UK, government is focussed on rebalancing the economy, both sectorally and geographically.

2.5.2 The latest Green Paper on Industry states that "for Britain to achieve its maximum prosperity, and for the economy to work for everyone, all parts of the country must be firing on all cylinders." Which means promoting growth in underperforming areas, bringing new jobs to communities across the country and making the most of the UK Regions' diverse strengths[33].

2.5.3 The overarching policy aim for NI is to deliver an export-led private sector driven economy. A balanced economy will distribute benefits more widely between communities - and ensure that NI is resilient.

2.5.4 The NI economy faces structural challenges that need to be addressed.

2.5.5 The FODC and NI economy is dominated by micro-businesses[34] as shown on Figure 2.4. Whilst these firms are dynamic and have the potential to grow fast, too few of them transition to larger firms, with greater capacity for trade and investment. Omagh has only five firms that have more than 250 employees and 15 that have more than 100. There are only 275 private firms employing more than 250 employees across NI, which would make DGL one of the largest employers in the Region, in the top 0.3% .

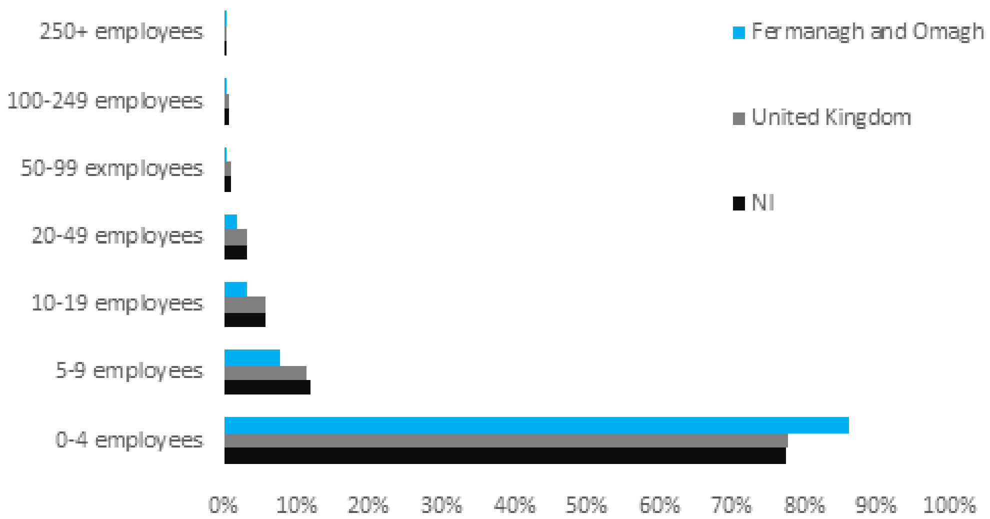


Figure 2.4: Proportion of enterprises by employment size band

"Our private sector needs to continue its growth to ensure our companies can compete locally, nationally and internationally"

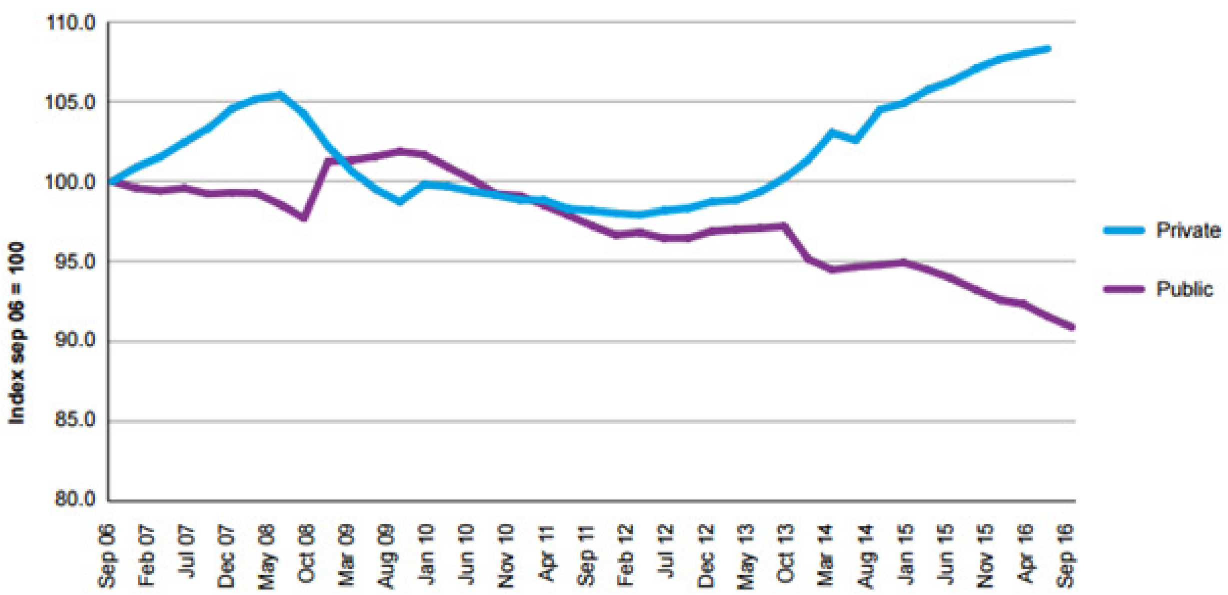
2.5.6 The rural economy is still dominated by agriculture, which has limited capacity for productivity or employment growth, and much of this economy is low-wage. Communities are still very reliant on public sector jobs. Construction, which is a key sector for NI, has been the worst hit by the recession, falling to nearly half of 2006 output in 2012. It has also been the slowest to recover, although the sector experienced a boom in 2015[36].

2.5.7 The public sector was the most stable between 2006 and 2012, but has been the worst hit since and is still below its pre-recession output levels. This is a response to government funding cuts; it is part of a deliberate strategy to rebalance the economy away from dependence on the public sector and build a stronger private sector base[37].

2.5.8 The chart below (Figure 2.5) demonstrates the effects of the recession and subsequent restructuring on the public and private sectors. Continued private sector growth is required to ensure that these public jobs are replaced.

2.5.9 The economy is now rebalancing away from its dependence on the public purse to support employment. The NI Executive believes this needs to continue to ensure the economy is resilient in the future[38]. The Draft Programme for Government states that, "Companies and the workforce are the key drivers of economic growth. Our private sector needs to continue its growth to ensure our companies can compete locally, nationally and internationally[39]."

Figure 2.5: Index of Public & Private Sector jobs



source: NISRA, 2016, Northern Ireland Composite Economic Index (NICEI)

2.6 Boosting Exports and Growing a Globally Competitive Economy

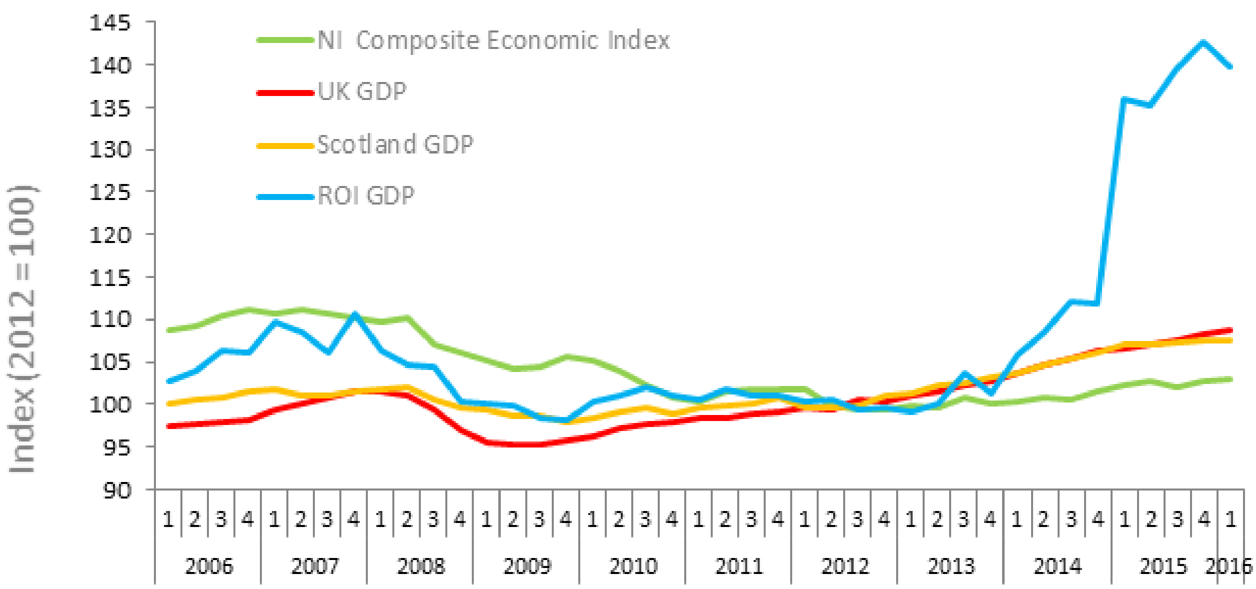
2.6.1 NI does not produce as much wealth per worker as other UK Regions. Low productivity means poor competitiveness in global markets and lower wages for workers. The NI economy produces 2.07% of the UK output[40] with a total annual GVA of £34.4 billion in 2015 and is performing poorly compared to the UK, Scotland and Republic of Ireland economies. NI experienced the greatest proportionate decline in output between 2006 and 2012 – and has been the slowest to recover as shown on Figure 2.6.

2.6.2 The Department for the Economy (formerly the Department for Enterprise Trade and Investment) is promoting export growth to help address this longstanding productivity gap, helping to build wider market resilience in the Region[43].

2.6.3 Exporters are generally greater investors in skills, more innovative, more productive and able to pay higher salaries[44]. The NI Executive has committed to focus support on the markets that offer the most export opportunity and where NI will have a global competitive advantage[45]. Their aim is to be world class and be recognised as a globally active exporting economy[46]. To do this, they will push for an increase in the value of sales outside NI by 33% by 2020 and by 80% by

Figure 2.6: Relative performance of the NI economy[41]

(Comparison of NICEI[42] with UK, Scotland & ROI GDP (2006 - 2016)



"NI will become one of the three most competitive small economies in the world by 2030."

"DGL has the potential to increase turnover in the mining sector by over a third and the value of exports from the sector more than four-fold."

2025, and become one of the three most competitive small economies in the world by 2030[47].

Export-Growth Potential

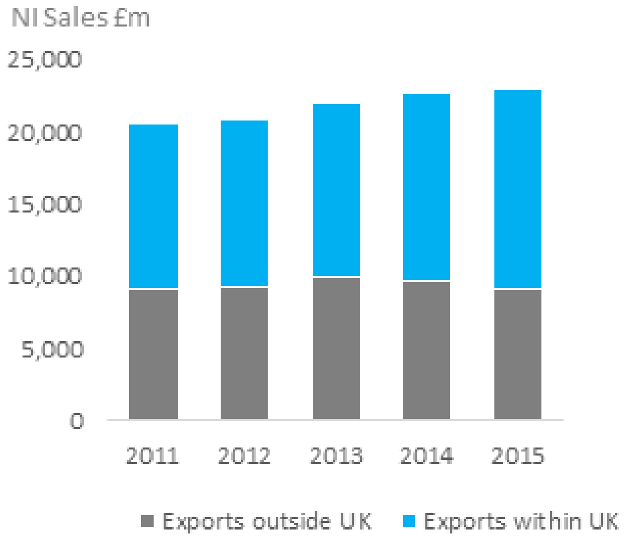
2.6.4 Export value has grown slightly faster than total turnover in NI since 2011 at 12% export growth compared to 8% turnover growth.

2.6.5 However, 60% of these sales is to elsewhere in the UK. Exports outside the UK have been stagnant since 2011. The total value of NI exports is £23 billion, of which £13.8 billion is to elsewhere in the UK and £9.1 billion is to elsewhere in the world.

2.6.6 Mining and quarrying currently generates £412 million in annual turnover and £31 million in non-UK exports. Whilst turnover in mining has increased since 2011, exports have declined. DGL has the potential to increase turnover in the sector by over 40% and the value of exports from the sector more than six-fold.

Figure 2.7

Within UK and non-UK exports 2011-2015



2.6.7 Given the changing economic landscape because of exiting the European Union, it is vital that NI is responsive and adaptable to achieve its objectives on trading globally[48]. International engagement is at the core of the Regional economic policy: "Economic success for NI must embrace an outward facing approach[49]". Foreign Direct Investment plays a vital role in raising productivity and innovation activity[50].

2.7 Supporting the Community

2.7.1 FODC wants to ensure its communities are vibrant, resilient and empowered. They will develop programmes of support for social enterprise/social entrepreneurs. They are supportive of programmes that encourage and recognise volunteering[51]. DGL is highly supportive of volunteers, encouraging staff to engage in community projects. More detail about this is set out in the Community Benefits section of this Report.

2.7.2 *Personal Wellbeing Survey* measures life satisfaction, happiness, anxiety and how worthwhile people feel their lives are across different parts of the UK. The Survey indicates that NI residents have a satisfaction with life that surpasses that of their counterparts in England. The Department for the Economy is committed to growing and increasing productivity without sacrificing quality of life[52]. Becoming the globally competitive economy to which NI aspires should not be at the cost of wellbeing.

3. Impact Assessment

3.1 Overview

3.1.1 The Curraghinalt Project will make a significant contribution to the policy aspirations outlined in the previous section.

3.1.2 At a local level, the Curraghinalt Project will provide jobs for residents, including jobs for young people who might otherwise emigrate. It will provide opportunities for local businesses who will form part of the supply chain. Through corporate sponsorship and the Community Fund, DGL will continue to invest in the community through separate environmental, educational, health-focused and social projects.

3.1.3 At a Regional level, the project will promote a balanced spread of economic opportunities, generate corporate and employment taxes and reduce NI's trade deficit.

3.1.4 At a National Level, the Project contributes to an overarching ambition to attract investment, boost private sector growth, upskill workers and succeed in global markets by expanding exports and competitiveness.

3.1.5 The following sections quantify these impacts in detail.

3.2 Construction Impacts

3.2.1 The Curraghinalt Project will require a capital investment of £160 million in pre-operation, over and above the £62 million already invested to date. DGL will invest a total of £331 million in capital and sustaining capital over the full 20-plus year life of the mine and 5 year decommissioning[53].

3.2.2 Construction will take 18 to 24 months and will create 6,000 person-months of construction employment, supporting 270 jobs on site.

3.2.3 This injection of £331 million of private sector capital investment will be the largest Foreign Direct Investment in NI since 2013, when benchmarked against investments that have been brokered by Invest NI[54]. As set out in policy, private sector investment will be the major contributor to growth in NI in the post-recession era and is essential to creating a skilled and resilient economy. To set this investment in context, the duelling of the A6 cost £160 million and the Belfast City Campus of the Ulster University was a £250 million investment. When compared to the top 10 recent private investments brokered by Invest NI, it ranks highest.

Figure 3.1 Comparative Scale of the Curraghinalt Investment Against top 10 investments brokered by Invest NI 2013-15

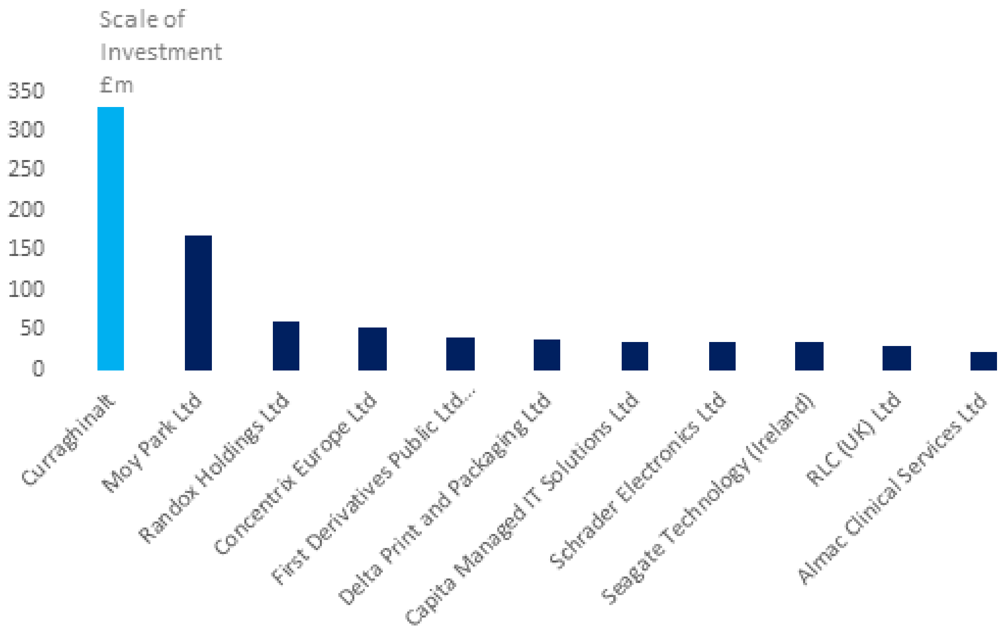
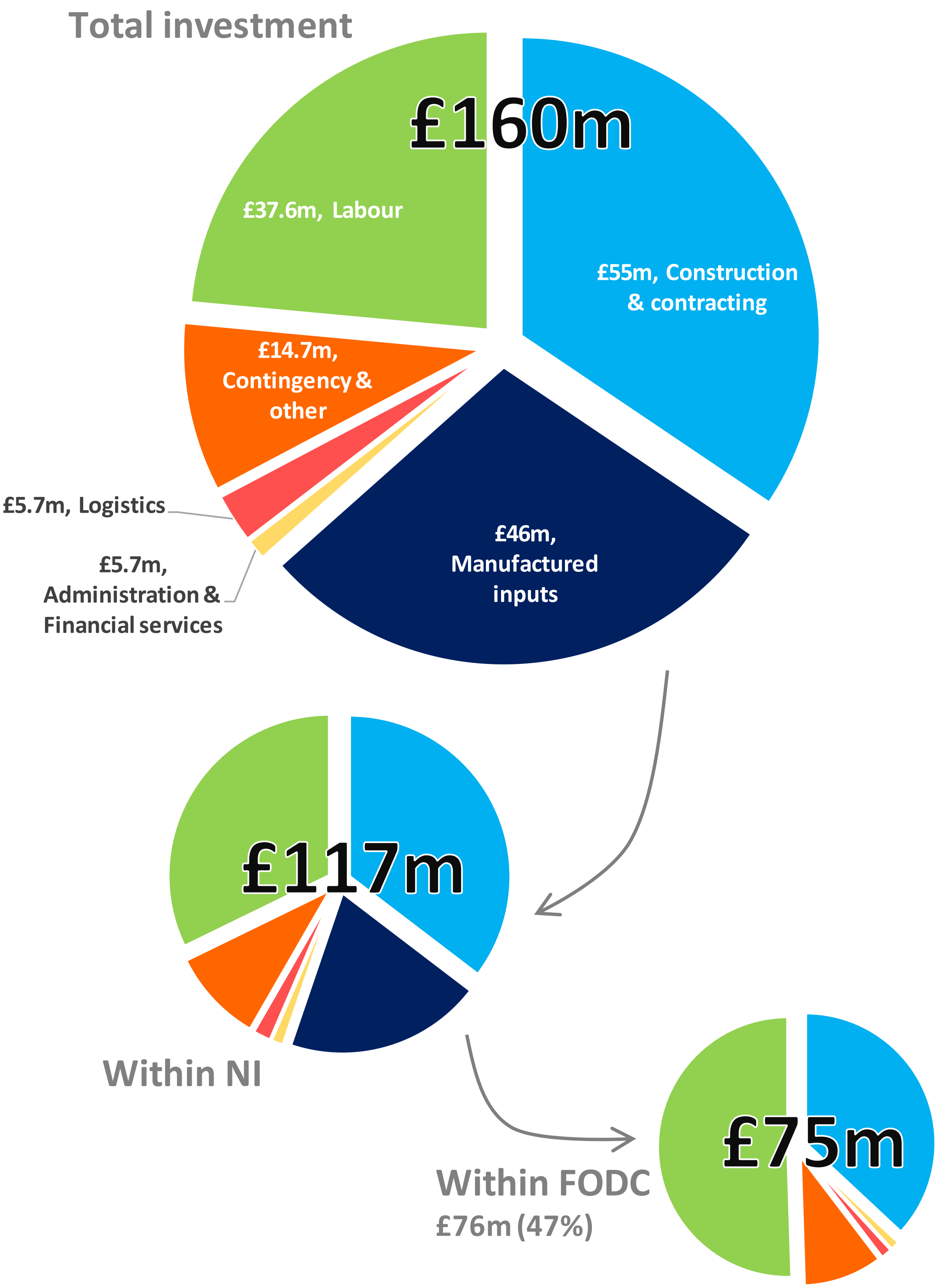


Figure 3.2 Curraghinalt Construction Investment by Sector –

Over two years, before operation starts



3.3 Direct Employment Impacts[55]

3.3.1 The construction period – scheduled for up to 24 months – will support over 6,000 person-months of construction. This will equate to approximately 300 construction positions on-site.

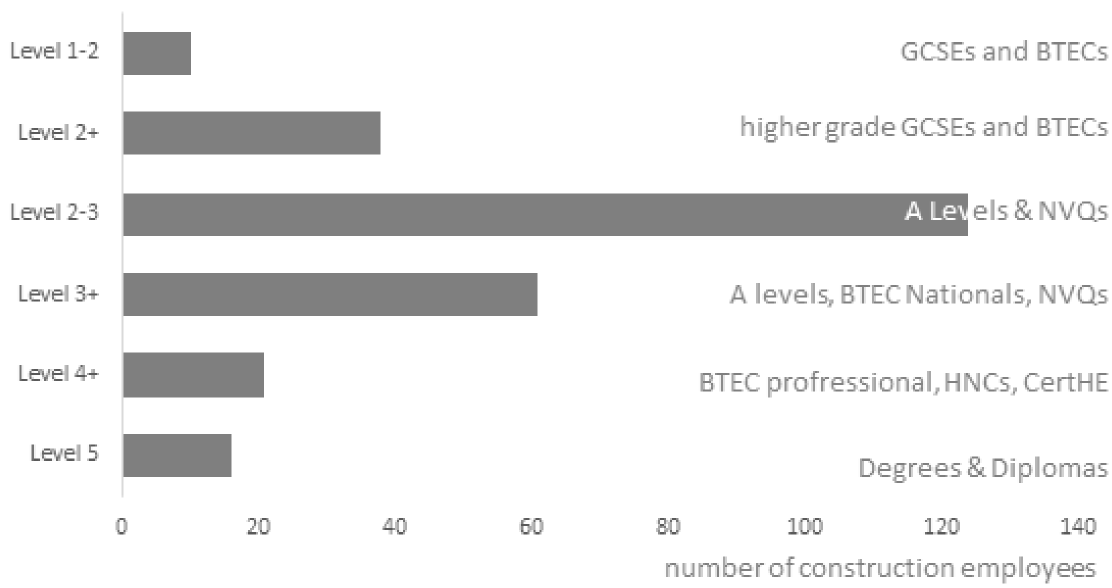
3.3.2 Some individuals would be on-site for a short period – weeks or months – whilst others might be on-site for the majority of the construction period, depending upon the phase of construction and workers' specialist skills. Some jobs will be office based (health and safety, human resources, accounts and administration) alongside manual jobs, skilled trades and technical professional roles.

3.3.3 The charts below show the skill profile and breakdown of construction phase jobs by type. The majority of jobs will be at Qualification Level 2-3. These jobs will require good GCSE grades, NVQs or BTECs - or relevant work experience but won't require a degree. They will provide suitable jobs for school leavers and will provide substantial opportunities to formalise skills and progress on-the-job. To progress and move to more technical or supervisor roles, employees may require higher apprenticeships, diplomas or A levels - and then a degree or equivalent to progress further. The construction skill profile is summarised in Figure 4.3 and set out in detail in *Appendix 2.*

3.3.4 Construction of the Project will also create professional, technical and managerial jobs with excellent wages. This will help the NI construction industry to recover, after a challenging few years.

3.3.5 One of the five *Pillars of Growth* in the NI Industrial Strategy is the need to "enhance education, skills and employability" in particular in the areas of STEM[56] - skills which will all be required for the Curraghinalt

Figure 3.3 Skills profile of Curraghinalt Construction Jobs



"For every job created by DGL during construction, another 1.8 jobs will be supported elsewhere in the economy"

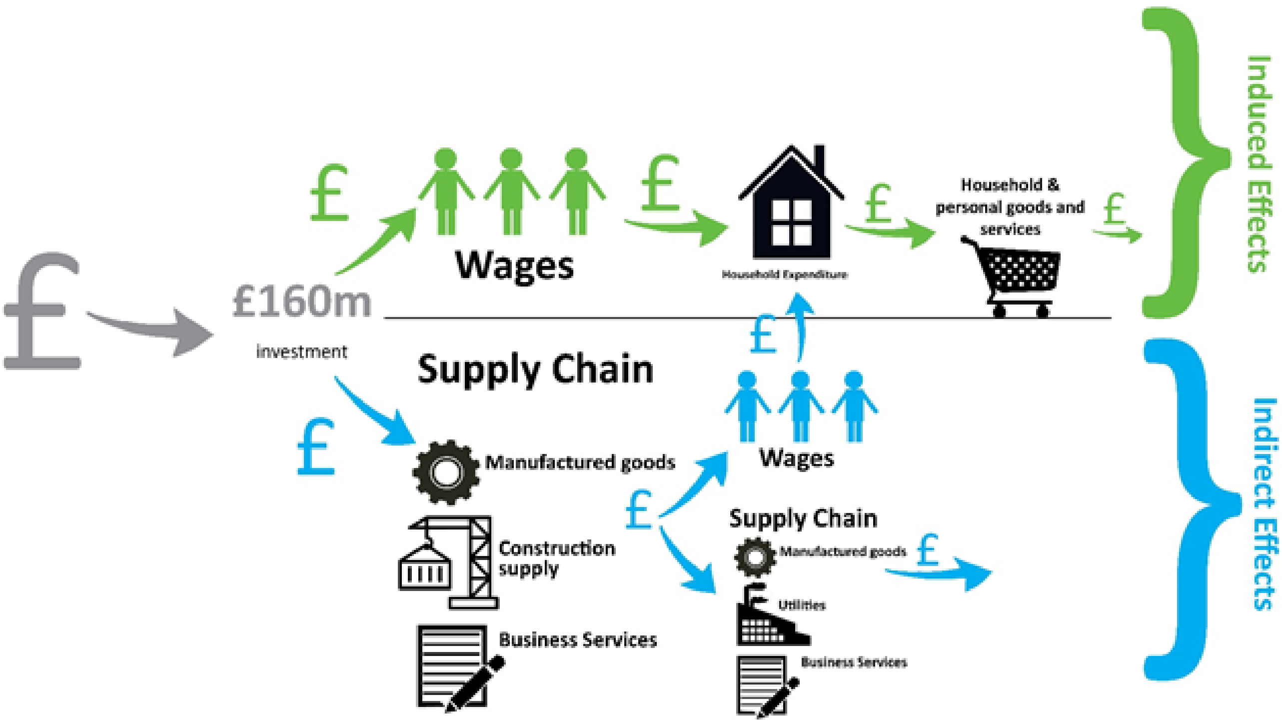
Project. DGL is committed to providing pre-employment support, targeted interviews and a clear path for career progression. This includes construction employees. Further detail about DGL's Employment and Skills Strategy is set out in the Community Benefits section and a full construction workforce profile is appended at *Appendix 2.*

3.4 Indirect and Induced Employment Impacts

3.4.1 As well as the direct employment, Curraghinalt will create multiplier effects through construction expenditure by DGL directly and by its workers. For every job created by DGL during construction, another 1.8 jobs will be supported elsewhere in the economy – including in local firms in FODC.

3.4.2 Spending by DGL on the materials and services required for construction will increase employment across the supply chain. This will, in turn, support the creation of new jobs at suppliers and those new jobs will in turn mean more wages and more spending by those workers. These are called indirect effects.

3.4.3 Construction employees would spend some of their increased income in local shops and services, supporting employment there. In some cases, workers would move directly from unemployment to employment at Curraghinalt. In other cases, they would move from existing jobs, thereby creating vacancies for other residents to fill. The overall result is that more people would have a job and there will be an overall increase in wages and in spending. This spending would then support



more employment and economic activity at other businesses. These are induced effects. The figure below illustrates this process.

3.4.4 The construction of a mine at Curraghinalt is not displacing the construction of a mine or other development elsewhere, so again all the construction employment is additional to what would otherwise take place in the Regional economy. Construction output in NI has yet to reach its prer-recession levels, so there is capacity in the construction sector and labour market to accommodate growth. Therefore, we have not considered displacement for the construction investment[57].

3.4.5 Indirect employment has been estimated using a breakdown of construction spending. 37% of the £160 million initial investment will go on supply chain expenditure, purchasing machinery, construction inputs, energy, logistics, business and financial services and an element of contingency. When DGL purchases these goods and services it stimulates other sectors in the NI economy, creating indirect jobs in those sectors. Indirect jobs are most accurately represented in “1 year jobs” i.e. a job supported for one year.

3.4.6 Over the 18-24 month construction period, up to 725 indirect 1 year jobs will be supported by DGL’s investment.

3.4.7 The remainder of the investment will be spent on labour. For every job that DGL creates during construction, there will be more wages to be spent in the NI economy. The effect of these wages translates to jobs through purchases of jobs and services by new employees. These are induced jobs – also represented as “1 year jobs”. For every direct 1 year construction job created, DGL employees will support another 0.4 of a job elsewhere in the economy, a total of 170, 1 year induced jobs.

3.4.8 This impact is summarised in Table 3.1.

Table 3.1 Construction effects summary

Construction Summary: Employment	Impact
Total investment	£160m
Total Purchases	£121.6m
Total Labour Cost	£38.5m
Employment	
Direct jobs (1 year)	500
Multiplier effects: additional 1 year jobs	725
TOTAL (1 year)	1,400
Employment multiplier	2.8

This investment will help to support the regeneration of the construction sector – one of NI's most important for both output and employment.

3.5 GVA

3.5.1 The Curraghinalt Project will directly boost the economic output of NI. At a National level, this output is measured through Gross Domestic Product (GDP). At a sub-National level it is measured using "Gross Value Added" (GVA). GVA Gross value added is the value of output less the value of intermediate consumption.

3.5.2 The Office for National Statistics (ONS) estimates that approximately 40% of total construction investment (including staff costs) is "value added." For the £160 million of spending on construction inputs and labour for Curraghinalt, the direct GVA would be approximately £64 million.

3.5.3 For indirect effects, GVA is calculated using the ONS Input-Output tables. These show data on the proportion of sales value for any given industry that is accounted for by GVA. This ranges from just under 30% to over 50% across different industries. DGL has estimated their spending by sector including construction, manufacturing, energy, business services, transport and financial services. For those sectors, GVA is estimated at £40 million for the construction phase.

3.5.4 Every induced job, supported by salaries paid to DGL workers and in the supply chain, would generate GVA elsewhere in the economy. In NI, GVA per worker is approximately £47,000 on average, so one induced job equates to £47,000 of GVA3. The 170 induced 1 year jobs would generate £8.1 million of GVA.

3.5.5 Increasing NI output and boosting the Region's relative contribution to the UK economy are important Regional government targets. Construction output was badly affected by the recession and has been slow to recover. This investment will help to support the regeneration of the sector – one of NI's most important for both output and employment, supporting 22% of local (Owenkillew ward) and 8% NI employment[58].

Table 3.2 Construction GVA effects

Construction Summary: GVA	Impact
Total investment	£160m
Total Purchases	£121.6m
Total Labour Cost	£38.5m
GVA	
Direct	£64.0m
Indirect	£39.5m
Induced	£8.1m
TOTAL	£111.6m
Output Multiplier	1.74

3.6 Tax

3.6.1 The Project will make a significant contribution to the national exchequer. In particular, the Government will collect income tax from the workers' salaries (both direct and indirect) during the construction period.

3.6.2 Construction will create an estimated £14.4 million in government receipts for National Insurance and Income Tax. In the Regional context, this would amount to an increase in employment tax revenue of 0.3% - not insignificant for a single investment.

3.6.3 Business Rates and corporation tax are dealt with in the Operational Impacts section.

"To date, we've invested over £62 million in the project, with more to follow if we proceed with mining the deposit. That's led to the creation of over 40 jobs so far, as well as indirect and contractor jobs, to support the underground exploration program. At the height of exploration activities we employed 127 people, both directly and indirectly."

"350 employees would make DGL one of the largest private employers in the Region and in the top 5 in Omagh".

3.7 Operational Impacts

3.7.1 The mine production life is expected to be at least 20 years, with a 5 year decommissioning period thereafter, producing 3.5 million ounces of gold over this period. During this time, DGL will extract, on average, £183 million worth of recovered minerals per year – all of which will be exported from NI.

3.7.2 Over 20 years, DGL's investment will have a transformational effect on the Owenkillew ward economy – and across NI as a whole. As already demonstrated, construction will have substantial economic and employment effects. During operation, the long lasting effect of the Project on employment and the supply chain will be consolidated.

3.8 Direct Jobs

3.8.1 The operating costs of the mine are expected to be £66 million every year on average, paying salaries (£16.4 million), buying supplies and maintaining the on-site infrastructure (£48.5 million).

3.8.2 This will directly support 350 full time jobs, on average.

3.8.3 The NI economy is dominated by micro-businesses[59]. There are only 205 firms employing more than 250 employees across NI and only 5 in Omagh[60]. A minimum of 350 operational employees would make DGL one of the largest private employers in NI and in the top 5 employers in Omagh. Larger employers are able to provide the sustainability and investment capacity needed to drive the NI economy forward.

"Our young people are leaving and not returning; we must provide them with a district to return home to."
-FODC Community Plan p.33

3.8.4 DGL will support local residents into these jobs, pay above average salaries for NI and drive up skill levels. At least 350 permanent jobs will equate to 7.2% of FODC's 2030 employment target. This will help to create the "dynamic" workforce FODC is targeting, tackling disadvantage and reducing long-term unemployment, if the right skills interventions are secured. All of DGL's recruitment practices will strictly adhere to equality legislation and will be based on a clear policy to promote equality of opportunity in HR, recruitment, training and promotion practices.

3.8.5 26% of all working age NI residents are inactive - compared to a UK average of 22%[61]. At the last Census, 37% of residents (800 people) were inactive in Owenkillew ward. This puts a lot of pressure on those members of the community that are active to support the rest and to sustain local services.

3.8.6 Due to its rural nature, there are few jobs in Owenkillew ward. There are only 0.36 jobs at present per working age resident, which means there is a need to commute – or migrate. The local economy is also dependent on agriculture: more than half of local jobs are in this sector. New, highly productive and skilled jobs will have a transformational effect on the local economy and the opportunities available to residents, especially young people.

3.8.7 Continued private sector growth is required to ensure that public jobs that are lost as the economy rebalances are replaced. Investment

"My nephew works on a mine in Australia. New jobs at Curraghinalt provide him with the potential to come home."
- member of the community at DGL consultation event

is essential for the Government to hit its 70% employment rate target by 2020[62].

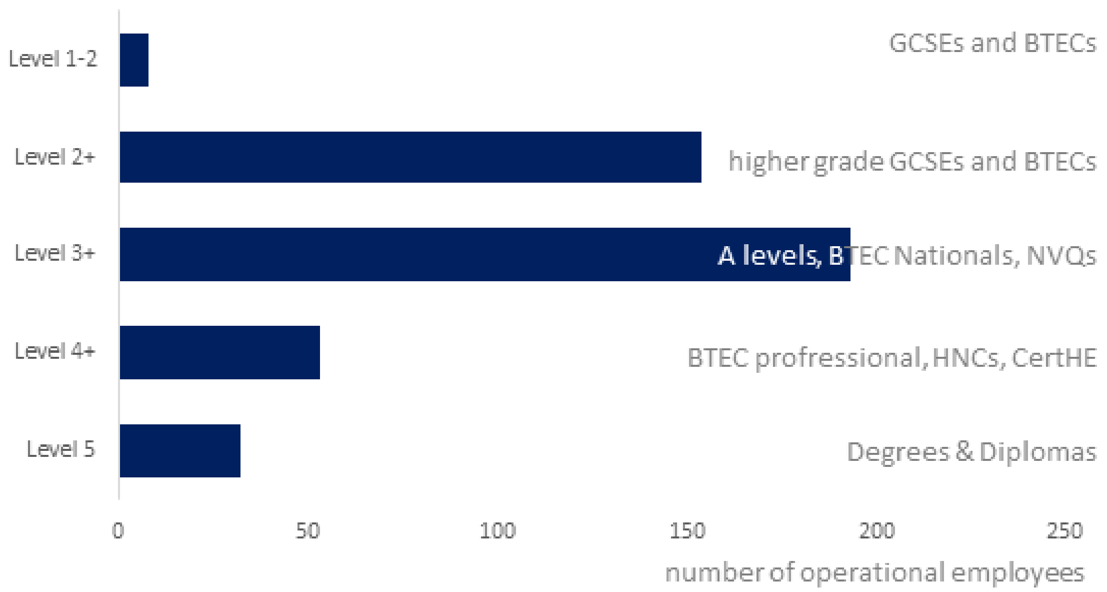
3.8.8 A high proportion of new jobs at the Curraghinalt Project are expected to go to NI residents including local communities. Ordinarily around 84% of people who work in FODC also live in the district and a small proportion in the neighbouring districts of Dungannon and Strabane (4% and 6% respectively). DGL will aim to match this proportion, promoting sustainable travel patterns and helping to capture benefits of their investment for residents of local communities. Shift planning will reduce traffic flow and DGL will put in place measures such as car sharing to promote sustainable commuting and reduce traffic effects.

3.8.9 Forty-two people who work for DGL live within County Tyrone[63]. Although there will be specialist employees and contractors who need to come from further afield, nationally and internationally, DGL will continue to foster the employment of local people wherever possible.

3.8.10 In order to address those areas where there is a skills shortage, DGL proposes a collaboration between DGL, their Mining Contractor and South West College. This collaboration will be flexible and will be informed and shaped by the needs of DGL over time. Its purpose will be to provide the training, mentoring and education necessary to achieve, by Year 3 of operations, 80% of the labour coming from within NI.

3.8.11 Such Skills development is essential for the NI economy to ensure global competitiveness and ensure that benefits of growth are distributed throughout the labour market.

Figure 3.4 Skill pofile of operational employment positions



3.8.12 Northern Ireland's Competitiveness Scorecard shows that success will be measured in:

- increased rates of STEM qualifications;
- investment in skills by foreign investors;
- improved skills profile of the population as a whole;
- an increased proportion moving into employment or on to further study; and
- reduced economic inactivity, especially in more deprived communities.

3.8.13 All of which the Curraghinalt project and DGL's initiatives would contribute to.

3.8.14 Offering the right type of jobs, alongside support, will help to reduce the numbers of people not working or not working as much as they want or need to. These jobs will be "good jobs" as viewed through the Government's Better Jobs Index. That means that DGL promotes a decent income, job security, work-life balance, satisfying work, autonomy and participation and decent working conditions (including sick pay, holiday pay, etc.). There will be opportunities to progress through the organisation, provision of internationally recognised and transferable skills as well as substantially higher than average wages.

Employment brings real, tangible, direct and indirect social and economic benefits, not only to those employed, but for all members of the community.

- Local Plan Preferred Options 2016, para 7.2

"These jobs will help to ensure the brightest and best stay and contribute to the local and Regional economy"

3.8.15 The chart below shows the skill profile and breakdown of new operational jobs by type. Like construction, the majority of jobs will be at Qualification Level 2 or 3. These jobs will require good GCSE grades, NVQs or BTECs - or relevant work experience, but won't require a degree. To progress and move to more technical or supervisor roles, employees may require higher apprenticeships, diplomas or A levels - and then a degree or equivalent experience to progress further and for management and technical roles.

3.8.16 A large number of jobs will be suitable for school leavers and will provide substantial opportunities to formalise skills and progress on-the-job. There will also be entry level jobs for those with few formal qualifications. This profile is an ideal match for NI residents – there are opportunities for relatively unskilled workers who might find few non-agricultural jobs locally – and there are opportunities for skilled residents who otherwise might migrate or emigrate in search of suitable work.

3.8.17 Operations at Curraghinalt will also create professional, technical and managerial jobs, attracting and retaining high skilled graduates to Owenkillew ward. These jobs will help to ensure the brightest and best stay and contribute to the local and Regional economy. DGL's employees will be skilled (or trained to become skilled) and will be paid accordingly. DGL's average wage would be in the region of £40,000 per year compared to an FODC average of £19,700 per year against an average across NI of £21,000[64].

3.8.18 Further detail about operational employment and training opportunities is set out in the Community Benefits section of this Report.

3.9 Indirect and Induced Employment Impacts

3.9.1 As well as direct employment, Curraghinalt will create multiplier effects through operational expenditure by DGL directly and by its workers.

3.9.2 For every job created by DGL during operation, another 1.6 jobs will be created elsewhere in the economy[65].

3.9.3 As with construction, spending by DGL on the materials and services required for operation will increase employment across the supply chain. That will support the creation of new jobs at suppliers and those new jobs will in turn mean more wages and more spending by those workers.

3.9.4 Indirect employment has been estimated using a breakdown of operational spending. 67% of the £66 million average purchasing expenditure will go on continued construction operations at the mine such as blasting and tunnelling. Manufactured inputs will amount to 20% of spending; energy, logistics, business and financial services and an element of contingency will account for the rest.

3.9.5 For every year of operation, this spending in the supply chain will support 520 indirect jobs elsewhere in the NI economy.

3.9.6 The remainder of the investment (£16.4 million) will go on labour costs every year. For every job that DGL creates during operation, there will be more wages to be spent in the NI economy. For every four direct operational jobs created, DGL employees will support another job elsewhere in the economy, and a total of 100 induced jobs will be supported at any one time during operation.

Table 3.3 Operation employment effects

Operational Summary: Employment	Annual Impact
Sales price per oz	£1,042
Total expenditure	£65.6m
Total Purchases	£48.6m
Total Labour Cost	£16.4m
Direct Employment (average)	390
Multiplier effects: additional jobs	620
TOTAL employment	1,010
Employment multiplier	2.6

"Our Economic Strategy clearly identified that the route to economic success would come through a renewed focus on export led economic growth – and that still holds true today[71]."

3.10 GVA

3.10.1 NI does not produce as much wealth per worker as other UK Regions. Low productivity means poor competitiveness in global markets and lower wages for workers. The NI economy produces 2.04% of the UK output[66] (with 2.8% of the total population). NI had a total annual GVA of £34.4 billion in 2015.

3.10.2 GVA generated by the annual operation of the Curraghinalt Project will amount to £120 million. To put that into context, that is equivalent to 80% of the total GVA currently generated by the mining and quarrying sectors in NI[67] – almost doubling the sector's output. It is equivalent to nearly a third of output in the agriculture, forestry and fishing sectors combined[68]. It would equate to 0.035% of NI's total GVA – significant for single project[69].

3.11 Exports

3.11.1 The NI Executive wants to increase the value of non-GB sales outside NI by 33% by 2020.

3.11.2 All of Curraghinalt's output will be exported. Gold prices are amongst the highest they have been for 30 years and DGL will export £183 million worth of gold and silver a year on average over 20 years. This is 9 times the export value of all non-GB agriculture, forestry and fishing exports from NI each year and double the value of business service exports. It will reduce the Regional trade deficit of £6.1 billion by 3%. This boost also equates to 6% of the NI target growth in non-GB export sales.

"DGL's economic boost alone equates to 6% of the NI target growth in export sales."

Table 3.4 Summary operational effects

Operational Summary: GVA	Impact per year
Total expenditure	£65.6m
Total Purchases	*£48.6m*
Total Labour Cost	*£16.4m*
GVA	
Direct	£120.2m
Indirect	£24.1m
Induced	£4.6m
TOTAL	£148.8m
Output Multiplier (Type II)	1.24

3.11.3 International competitiveness and increased exports, especially beyond GB – is a key Regional priority. As will be seen at Curraghinalt, working in export markets promotes skill development and productivity. Export revenue is good for the economy as a whole. FODC has committed to supporting a thriving, connected and outward looking economy[70] and Curraghinalt will be part of that.

3.12 Tax

3.12.1 Whilst the NI tax base is growing, it remains substantially in deficit.

3.12.2 Total public sector revenue collected in NI was estimated to be £14.8 billion in 2012-13 or 2.5% of the UK total (the most recent full accounts that have been published[72]). Revenue collected grew slightly to £14.9 billion in 2013-14 – still 2.5% of the equivalent UK total.

3.12.3 For 2012-13 the estimated fiscal balance in NI was a deficit of £9.5 billion (29.1 % of GVA). The 2013-14 fiscal deficit decreased to £9.2 billion.

3.12.4 In 2013-14 the fiscal deficit was equivalent to £5,006 per head. This compared to a UK per head figure of £1,763. The NI fiscal deficit, as a percentage of GVA, was 27.9%, which remained substantially higher than the UK equivalent of 7.5%.

3.12.5 During operation, DGL is expected to pay, on average, over 20+ years:

- £195,600 in Business Rates every year
- £8 million in Corporation tax every year
- £4 million in labour taxes every year.

4. Potential Related Effects

4.12.1 This section looks at economic effects that are not directly generated by the mine but could occur indirectly as a result of DGL's activities. Specifically, it addresses effects on tourism and the environment that may have knock-on economic effects.

4.12.2 Discussions with local residents have highlighted concerns that the proposed scheme could have adverse effects on the tourism – and business that relies upon it. This section appraises the evidence that the Curraghinalt Project would not have any effect on tourism and the visitor economy. The Northern Ireland Statistics and Research Agency estimates that non-domestic tourism generated £541 million to the economy in 2014 and domestic tourism generated £219 million. Of this, the greatest share comprised the Belfast City local authority area (£243 million). FODC generated an estimated £64 million for both domestic and non-domestic tourism.

4.1 Tourism and Visitor Economy

4.1.1 Whilst the Sperrins AONB is the principal tourist attraction in the local area, there is very little tourist activity in the area immediately around the Project Site. The Sperrins is not a priority area for NI tourism. To put the value of the Curraghinalt Project in context, the annual sales value of the mine's output will be up to £183 million. In 2014, the whole of the FODC area generated an estimated £64 million for both domestic and non-domestic tourism.

4.1.2 Attractions in the area include visitor and heritage centres, parks and nature walks, cycle routes and rivers and lakes. But there are only two known places to stay as a visitor that are located within Owenkillew ward – Pat Larry's Self Catering Cottage and Hawthorn Cottage. Both are located on Greencastle Road c. 2km straight line distance from the centre of the Project Site.

4.1.3 Rivers and lakes in the vicinity of the Project Area which can be used for kayaking, canoeing and angling include Gortin Lakes as well as the Owenkillew River. The Gortin Lakes are a series of small lakes to the south of the village of Gortin, 7.5 km to the southwest of the Project Area.

4.1.4 While the stretch of the Owenkillew River directly to the north of the Project Area is not suitable for canoeing or other boating, access to the river is available further downstream at Killymore Bridge Canoe Steps, on the B46 (approximately 4 km to the east of Newtownstewart or 12 km from the Project Area).

4.1.5 The Owenkillew is a spate river well suited to salmon and sea trout fishing. Omagh Anglers control a large part of the lower stretch of the Owenkillew just east of Newtownstewart to the confluence of the Glenelly River. The stretch between the "Magistrates" and Trinamadan Bridge further up the Owenkillew River is owned by the Blakiston Houston Estate and can also be fished with a permit.

4.1.6 There is no consolidated list of local fishing licences available that have been used annually. Local consultation by DGL indicates that local fishing permits (which allow the holder to fish specific stretches of water) amount to approximately 1,260 people who are allowed to fish on the Owenreagh and Owenkillew Rivers in a given year[73].

4.2 Potential effects

4.2.1 Tourism is driven by the key local characteristics of an area. The Curraghinalt Project is located within the southern extent of the Sperrins AONB. The elements that have led to its designation as such are set out by the Department of Agriculture, Environment and Rural Affairs (Northern Ireland) as:

> *"The Sperrin AONB encompasses a largely mountainous area of great geological complexity. Stretching from the Strule Valley in the west to the perimeter of the Lough Neagh lowlands in the east this area presents vast expanses of moorland penetrated by narrow glens and deep valleys. In its south, the Burren area is noted for its lakes, sandy eskers and other glacial features. The area is rich in historic and archaeological heritage and folklore[74]".*

4.2.2 These attributes are amongst the key reasons why tourists visit the AONB and it is possible that any damage to these qualities, perceived or otherwise, could reduce visitor numbers.

4.2.3 In the context of the diversity and breadth of the Sperrins AONB tourism offer and the extent of the geographic area, the effects are expected to affect a small area of the AONB and be limited in their nature.

4.2.4 The Owenkillew Ward is not a significant tourist destination within the AONB. As set out in the *Socio-Economic Baseline Study* submitted as an Appendix of the ES, there are only two tourist accommodation establishments within Owenkillew. These are two small self-catering cottages with four bedspaces each. Whilst there are local attractions, namely national cycle routes, rivers and lakes used for fishing and water sports, these are not in the immediate vicinity of the Project Site. A map and description of local tourist attractions is included in Section 5 and Figure 5.1 of the *Socio-Economic Baseline Study.*

4.2.5 The Curraghinalt Project would not create any significant adverse effects with respect to surface water runoff and water quality in local rivers and burns, dust, car and HGV emissions, ventilation raise and stack emissions, vibration, during construction or operation. The Site is not currently visited by any tourists for its ecological value. The wider area is used by local and visiting fisherman and the effect on fish and water courses is not found to be significant, and will be monitored. The sections below set out in more detail how key factors with the potential to affect tourism will not have a significant adverse effect.

4.3 Visual effects

4.3.1 Views of the Curraghinalt Project will not compromise the designation of the Sperrin AONB. Significant landscape and visual effects which arise will be concentrated within a very localised and a visually contained area of the Sperrin AONB. The wider scenic qualities of the AONB will be largely unaffected by the presence of the development, and the effects will not reduce the overall integrity of the AONB.

4.4 Traffic

4.4.1 Shift patterns proposed by DGL would ensure that only administration staff traffic would impact the road network at peak hours due to the shift patterns proposed by DGL. DGL and their subcontractors would also use multi person vehicles and car shares resulting in an average of 4 persons per vehicle during the construction phase. The existing junctions are considered fit for purpose, with spare capacity and with no significant risks of driver delay or network capacity issues during construction or operation. Based on the anticipated volumes of traffic levels during the construction and operation phases pedestrians would not experience delays, impacts on their amenities or cause them fear or intimidation.

4.5 Noise

4.5.1 The main sources of noise during the construction phase will be from earth movement, excavations, blasting, foundation works, building construction and access road construction. Noise from the works will be perceptible at nearby properties but this is expected to be intermittent and temporary. Blasting will result in a very short term and instantaneous noise impacts. The highest blasting effects would only be heard within 1km.

4.5.2 The ventilation fans will not be audible at ground level in the operational phase. Traffic noise effects would be isolated and not significant. Extraction and processing of gold, treatment activities and site would have very low noise levels that will not affect enjoyment outdoor amenity areas or cause sleep disturbance, even at the closest property. The WHO guideline noise levels will not be exceeded at any nearby residential properties.

4.6 Cultural heritage

4.6.1 The site represents an area of limited archaeological significance – although it is surrounded by an area of much greater interest. In the wider landscape, 34 archaeological monuments, 32 industrial heritage sites and two historic buildings were identified within 3 km. We do not have data on if and how often – if at all - these sites are visited by tourists.

4.6.2 Most of these are unlikely to be impacted at all by the project. The only assets that will be impacted by the Project are actually on the Project Site, including Pollan Rua Cottage, some poorly preserved building remains/roof structures and the 19th century field system and a trackway. Pollan Rua cottage used to be an operational holiday rental home, but is owned by DGL Ltd and has not operated as such for several years. The overall effect of this loss on the local visitor economy would be very limited.

4.7 Fishing and water habitats

4.7.1 The one local asset that does have a regular visitor economy associated with it is the Owenkillew River. The river is used for fishing and recreation and has ecological value.

4.7.2 The activity of the mine could result in a small reduction in the flow of the Owenkillew River and could result in the discharge of treated water. This is set out in detail in the Environmental Statement. This is not expected to have any significant effects on the freshwater pearl mussel or salmon populations (including salmon holding, spawning and nursery areas, for which the Owenkillew Special Area of Conservation is of European importance).

4.7.3 DGL's activities are not expected to impact on any other species for which the Owenkillew River or the Drumlea and Mullan Woods Areas of Special Scientific Interest (ASSI) or are considered to be of conservation importance. No significant impacts are predicted on the fisheries interest of this river.

4.7.4 DGL is proactive in protecting neighbouring river habitats which will ensure the health of the river for fishing and other leisure activities, and support the sustainability of the local ecosystem. More detail about their ecological commitments is set out under the *Community Benefits* section of this report.

4.8 Overview of tourism effects

4.8.1 Based on these assessments, it is very unlikely that a tourist visiting the Sperrins would experience any effects at all from the Project. If any are, these effects would only be experienced by any visitors for a very small portion of the time, without any significant impact on their trip overall. A typical visitor would not be interrupted or disturbed by the activities.

4.8.2 Overall, the proposed mine is not expected to generate any significant adverse effects that could damage tourism. The Sperrins is not a major tourist destination for NI and does not generate a significant amount of tourist related revenue, especially not the part of the Sperrins around the mine. The potential for future tourism growth here would not be limited by the mine.

4.8.3 The Curraghinalt Project could generate some positive effects with respect to tourism and visitor attractions. DGL has organised tunnel and site tours as a pilot to test the interest in the Curraghinalt Project and the surrounding areas as a tourist attraction and share the project with the community. Approximately 560 people participated between June 2016 and May 2017. Efforts to improve water ecology through monitoring of the freshwater pearl mussel population could also be beneficial to overall attractiveness of the area to tourists, especially fisherman.

5. Community Benefits

5.8.1 This Report has set out the substantial scale of the benefits of this Project at the Regional and local level.

5.8.2 At the local level, the effects are smaller in absolute terms, but more significant, given local challenges, in particular in securing skills, retaining young people and investing in the community for the long term.

5.8.3 DGL has already demonstrated a commitment to investing in the communities around the Project. During construction and into operation there will be even more opportunities for the community to gain from the investment as DGL will have increased cashflow to reinvest - and DGL will continue to ensure that locals have the opportunity to benefit. This is a once in a generation opportunity for Owenkillew ward and FODC residents.

5.1 A Legacy of Investment

5.1.1 DGL established The Tyrone Fund in late 2015 to support community projects. Administered by a three-person Executive Committee with two independent members, at mid-2017, DGL has already supported community initiatives to the value of almost £270,000.

5.1.2 These have included the refurbishment of local churches and support for community activities as well as a Fresh Water Pearl Mussel education and protection programme through match funding with Northern Ireland Environment Agency and work with the Owenkillew Community Development Association.

5.1.3 DGL staff volunteer on community projects and in 2014-2016 DGL has spent almost 600 hours on community initiatives including environmental clean-ups, and Christmas and summer events for local families.

5.1.4 DGL is committed to offering learning opportunities for residents and visitors alike. By May 2017, 560 free tunnel and site tours had already taken place in the existing underground development. DGL hopes to provide a longer-term visitor offer when the mine is fully operational.

5.2 The Future of Community Investment

5.2.1 DGL will continue its corporate sponsorship activities throughout operation of the Curraghinalt Project. It will set aside funds every year, which will be ringfenced for projects within nearby communities that have demonstrable social, educational, health and/or environmental return.

5.2.2 In addition, in advance of going into commercial gold production the Company intends to create a broad-based community fund. The purpose of the fund is to support and encourage sustainable community projects independent of the mining operations. The intention is that the fund would be overseen and managed by a committee, formed in consultation with the community, and structured such that the benefits would flow especially to the communities in the immediate neighbourhood of the operations. An initial grant to the fund of £2 million is envisioned with an additional £100,000 endowment at the end of each year of commercial production.

5.3 Supply Chain

5.3.1 DGL will maximise the amount of its expenditure that will be retained within NI - and where possible within FODC. DGL commits to buying local goods and services wherever they can to ensure that a significant proportion of any spending effects goes to local people. DGL promotes the use of local restaurants and cafes for all visitors to their offices in Gortin and has ongoing agreements with local places for their visitors to stay. Fuel is purchased in local filling stations, they support local hardware stores and sub-contractors such as electricians, plumbers, and mechanics are local whenever possible. DGL is deeply embedded in the local community and is a member of the local Chamber of Commerce.

5.3.2 Current spending forecasts show that up to £26 million of purchasing expenditure per year is expected to be spent with firms within FODC – that is nearly a third of total expenditure captured locally.

5.3.3 DGL commits to supporting local businesses to access tender opportunities. They have an open door for local companies and will provide assistance and feedback wherever possible, including holding business development workshops.

5.4 An Employment Skills and Training Programme

5.4.1 DGL is committed to supporting NI residents to gain access to good quality, highly skilled, well paid jobs at the Curraghinalt Project. They will provide pre-employment support, targeted interviews and a clear path for career progression.

5.4.2 As outlined previously, DGL already employs 42 people who live within Tyrone. Although there will be specialist employees and contractors who need to come from further afield, nationally and internationally, DLG will employ local people wherever possible. DGL commits to providing support for residents to train for and access jobs at Curraghinalt. Once employed, DGL commits to support all employees' career progression. They will strictly adhere to all of the Regional Government's equality legislation and will promote equal access to the new jobs from all sections of the population.

"Current spending forecasts show that up to £26 million of purchasing expenditure per year is expected to be spent with firms within FODC"

"DGL is committed to supporting NI residents to gain access to good quality, highly skilled, well paid jobs at the Curraghinalt Project."

5.4.3 DGL's employment and training initiatives are already underway:

- DGL has run eight fully paid internships every year of operations so far
- DGL, in partnership with South West College, are offering five £1,000 grants to successful applicants from subjects such as Geology, Civil Engineering, Environmental Sciences, Communications, Stakeholder Engagement, Administration, IT and Health and Safety.

5.4.4 These initiatives will be developed as operations progress. DGL envisages that, in order to commence mine operations safely, quickly and efficiently, they may initially may need as much as 80% of the specialised workforce (just under half of the total) to be imported and 20% to come from the local labour market. The non-specialised workforce, over half the 350 total, will have the everyday skills needed to run many businesses in Northern Ireland, admin, finance, IT, HR, Health and Safety, environmental as well as electricians, mechanics, welders, truck and machine operators. These people would come from the local workforce.

5.4.5 In order to address those areas where there is a skills shortage, DGL envisages a collaboration between DGL, their Mining Contractor and the colleges, South West and Northern. This collaboration will be flexible and will be informed and shaped by the needs of DGL and its purpose will be to provide the training, mentoring and education necessary to achieve by Year 3 of operations a reverse of the above numbers so that 80% or more of the specialised labour will come from the local labour market.

5.4.6 As already mentioned, many of the skills required will be immediately transferable from the local talent pool. DGL is aware that South West College already prepares a pipeline of talent for the successful engineering industry in Tyrone and some additions and modifications can easily be made to many of these courses to make them more relevant to mining.

5.4.7 Another entry point is through on the job learning which would apply to drilling, blasting and mining for example. There would need to be senior operators in these divisions, who will need to be brought in as skilled labour but they will need helpers and assistants. As DGL has already witnessed during exploration activities these can be easily sourced from the farming and construction workforces already well established in the local community with transferable skills as a suitable foundation for further training. Over relatively short periods those trainees who show initiative at these levels will progress steadily and through either continued in-house training and mentoring or, perhaps partnership schemes with South West College. DGL will support them to acquire all the necessary skills and knowledge to progress to the next level.

5.4.8 Some fields are more specialised and require specific qualifications. Geologists, mine engineers, metallurgists, process plant management and technicians, for example, may not be readily and usually available in the NI economy. These positions would only be a small minority of the total workforce. DGL would, in the first instance, seek to repatriate emigrants who have learnt the required skills overseas. As a last resort, DGL would employ globally but will continue to focus on the building capacity in the local labour force wherever possible.

5.4.9 DGL intends to employ up to 30 paid summer interns each year. They envisage these people coming from university, college, and those in the last year of sixth form. This will be an extension of the smaller internship programme DGL already runs annually and will grow in line with their overall numbers.

5.5 Protecting and enhancing the environment

5.5.1 DGL respects the environmental heritage of Owenkillew and the Sperrins, which includes an AONB, an Area of Special Scientific Interest (ASSI), and a Special Area of Conservation (SAC). DGL's operations are expected to continue to be both subject to the most stringent and rigorous regulatory standards and frequent inspections by the appropriate agencies.

5.5.2 Since the commencement of Phase 1: Site Set-Up (27 August 2014) to completion of Phase 2: Exploration Tunnelling (8 May 2017) at the exploration site, DGL has records of 74 separate confirmed visits from regulatory agencies (including a range of departments from the Northern Ireland Environment Agency, planning authorities (local and Regional), Loughs Agency and Transport NI), as well as a host of other unconfirmed visits and those from non-statutory stakeholders.

5.5.3 DGL considers it has a corporate and social responsibility to protect its environment, and to be a careful stewards of habitats and species. DGL has, between direct investment and release of match funding, overseen the spend of £40,000 - £50,000 in protection measures for the endangered Fresh Water Pearl Mussel (FWPM) which has populations in the upper reaches of both the Owenkillew and Owenreagh rivers. This has included working with the NI Environment Agency to install 2,000m of fencing to reduce animal trespass and associated silt build up into the Owenkillew River and its tributaries.

5.5.4 DGL recognise the conservation status of the waterways in the vicinity of the proposed development and their associated protected species. In order to ensure existing habitats are conserved and enhanced in future, River Care Ltd was commissioned by DGL to carry out a scoping exercise on potential conservation options for the fresh water pearl mussel populations of the Owenkillew and Owenreagh Rivers, County Tyrone. The exercise identified both in-situ and ex-situ conservation measures, based on other similar successful projects, which may be considered for the conservation of fresh water pearl mussel. This report is submitted with the Application.

5.5.5 Investment in pearl mussel monitoring and conversation would support an estimated 3 full time (or more, if part time) jobs coordinating the expenditure of funding and undertaking technical testing and analysis.

5.5.6 Silt remediation works and fencing (management of livestock access) have significant benefits to other species including those that would attract recreation and tourism – e.g. salmon, trout, otter, kingfisher, heron.

5.5.7 There would be the opportunity for volunteer positions and educational outreach programmes associated with the mussel protection scheme – these would help to engage local residents, particularly young people, in science, ecology and conservation, with future benefits for their education and the scientific skills base of NI.

5.5.8 Tree planting (willow and alder), fencing and soil protection measures (preventing erosion) have benefits for farmers, protecting agricultural land and, in some cases, are able to facilitate bringing vulnerable cultivated and pastoral land back into use.

5.5.9 This work will reduce the risk of fines to the NI Exec under Water Framework and Habitats Directives.

5.5.10 DGL is committed to invest in the conservation of the fresh water pearl mussel in the Owenkillew River SAC and the Owenreagh River ASSI and work with local NGOs to deliver these measures in the most effective manner.

5.5.11 DGL is investigating ways to support the local fishing community. Whilst fishing is not generally undertaken in the immediate vicinity of the Project Site, other parts of the Owenkillew River, downstream of the Project Site, are well suited to salmon and sea trout fishing. Initial discussions have been held with the Loughs Agency. The Agency aims to provide sustainable social, economic and environmental benefits through the effective conservation, management, promotion and development of the fisheries and marine resources of the Foyle and Carlingford Areas.

5.5.12 DGL will engage with these angling clubs and their members to understand what investment is required to enhance their fishing experience. For example, there are currently no fishing huts which can provide shelter, basic facilities and storage during day trips along this stretch of the river. DGL will consult will local club members to understand their needs and the viability of new facilities. Such initiatives are likely to be delivered via corporate sponsorship.

5.5.13 DGL has undertaken an extensive Environmental Impact Assessment, and has prepared a detailed Environmental Statement considering landscape and visibility, noise, water, air quality and public health, amongst other studies.

5.5.14 The Curraghinalt Project will:

- Monitor levels of dust, noise, vibration, radon, etc., as it does at the current site;
- Not use a tailings dam or pond. Instead it will use the dry stack method (like damp sand) which will be continuously rehabilitated;
- Recycle as much water on site as possible;
- Test and treat all surface and underground water before leaving the site at the purpose-built waste water treatment plant; and
- Ensure that the concentration of cyanide at the end of the process will be below the EU limits. Material that has come into contact with cyanide will not be left on surface but will be returned underground as part of a cement paste backfill after the cyanide levels have been returned to levels below EU limits.

5.5.15 Further detail about these measures is set out in the ES. Refer to Chapter 8 of the ES for a summary of potential effects, details of proposals, and for mitigation and enhancement measures that are in place.

5.5.16 DGL understands community concerns around cyanide. It has committed to the International Cyanide Management Code (ICMC) which goes above and beyond the stringent requirements of existing legislation for one of the most highly regulated substances in the world. As such it will be stored, used, controlled and managed in a manner protective of employees, the environment and the public.

5.5.17 DGL's proposed process includes methods to minimise the use of cyanide, as well as cyanide detoxification prior to any substance leaving the processing plant. Gold bearing material will be separated by a simplified physical process prior to chemical treatment, greatly minimising the use of cyanide. No material which has come into contact with cyanide will be placed on the ground surface.

5.5.18 Processed ore that has come into contact with cyanide will be detoxified prior to leaving the process plant, and will be placed back underground as a cemented paste backfill. Cyanide detoxification will reduce the concentration of weak acid dissociable (WAD) cyanide to half the concentration limit specified in Regulations[75]. In addition, DGL is not intending to manage output from the detoxification plant in a pond, but rather the liquid will form a minor piped contribution to a mine water treatment plant to service the overall surface mine infrastructure site.

5.5.19 DGL has commissioned SRK Consulting to set out a *Conceptual Rehabilitation and Closure Plan* for the Project which establishes the approach to the closure of the mine when the mineral resource has been exhausted. This Plan sets out how DGL will rehabilitate the site and put in place any necessary safety and monitoring measures.

6. DGL's Contribution to the Programme for Government

6.5.1 DGL will contribute to a prosperous, strong, competitive, Regionally balanced economy by:

- Investing £331 million in the NI economy over 25 years
- Exporting £183 million worth of minerals every year
- Building skills and supporting NI residents into high paying, skilled jobs
- Delivering growth, employment and investment in a rural area

6.5.2 DGL will protect the environment and encourage sustainable practices by:

- Putting in place stringent, best practice, environmental monitoring and mitigation programmes
- Supporting sustainable travel patterns for their staff
- Supporting their local community and sustainable projects through ongoing corporate sponsorship and creation of a community fund

6.5.3 DGL will contribute to a more equal society by:

- Adhering to all relevant legislation and guidance on equality and equal access
- Providing training opportunities and career development programmes for NI residents
- Paying above average wages in a community with below average earnings

6.5.4 DGL will ensure that it contributes to an innovative, creative society, where people can fulfil their potential by:

- Providing training programmes, working in partnership with local colleges
- Investing in people
- Investing in the NI economy, bringing in best practice and cutting edge in construction and mining technology

6.5.5 DGL will provide more people with better jobs:

- Delivering 270 1 year construction jobs and 390 permanent operational jobs (on average) in a community with relatively high economic inactivity and limited prospects for growth
- Paying significantly above average wages
- Providing excellent career development and training programmes

6.5.6 DGL will ensure its community is a place where people want to live and work, and to visit and invest by:

- Supporting their community through the ongoing corporate sponsorship
- Creating a community fund to support sustainable community projects
- Providing excellent wages and career development paths
- Supporting their environment and local ecology, including for recreational purposes
- Spending money locally, in the supply chain, which will support local business, suppliers and their employees
- Fostering local business confidence and promoting investment

7. Conclusion

7.5.1 The Curraghinalt Project will bring Regionally significant economic benefits to NI. The investment will be on a scale rarely seen in the Region – and because of this scale, it will make a large and lasting contribution to the Regional and local Governments' aspirations. It will bring private sector led rural growth, rebalance the economy, create jobs, support skills development and increase NI's international exports.

7.5.2 There are few opportunities that will have the scale of positive effects that the Curraghinalt Project will. It is the largest single investment in NI in recent years. This is a rare opportunity for the NI economy, and a once in a generation opportunity for this community.

7.5.3 Local, Regional and national policy place great emphasis on economic growth, increasing employment and boosting exports. The NI Executive wants to create 80,000 new jobs across NI by 2030, stimulated by a target in private sector output of 35%[76]. DGL will create at least 350 operational jobs (and 270 temporary construction jobs) equating to 7.2% of the FODC's employment target for the next 20 years in a single project.

7.5.4 DGL will invest £160 million of private sector funds into the Curraghinalt Project during construction and a total of £331 million in capital investment over 20 years of operation and 5 years of decommissioning[77]. It will reduce the Region's trade deficit by £1,833 million - or 3%. The Project's output will be equivalent to nearly a third of output in the Agriculture, forestry and fishing sectors combined – and 10 times their export value. It would equate to 0.03% of NI's total GVA – significant for one operation.

7.5.5 This Report has set out these economic benefits in detail, for both the construction and operation of the Curraghinalt Project; and it forms part of the evidence base that supports the Planning Application.

7.5.6 A project of this scale and nature will help to combat some of the key economic challenges faced by the local and NI Regional economy: underemployment and economic inactivity, relatively poor skill levels and outmigration of young people are all challenges that will be greatly helped by a private sector investment of this type, with DGL's community commitments.

7.5.7 Economic inactivity is a particular local concern and underemployment of agricultural labour means that rural areas struggle to be as productive as they could. Farming in this area has limited opportunities for substantial increases in productivity or employment, so private sector investment in other sectors is essential to strengthen the rural economy. The UK's latest Green Paper on Industry states that "for Britain to achieve its maximum prosperity, and for the economy to work for everyone, all parts of the country must be firing on all cylinders." This means promoting growth in underperforming areas, bringing new jobs to communities across the country, and making the most of the Regions' diverse strengths[78].

7.5.8 The Project would have significant and positive benefits to address all these challenges - directly, through employment and output, and indirectly through the supply chain and employee expenditure. It would result in an increase in GDP, a Regionally significant reduction in the trade deficit, at least 350 high value direct jobs and many more in the supply chain, a boost to the employment rate and spending power, additional corporate and income tax receipts, and royalty payments.

7.5.9 DGL recognises that there is at least the potential for adverse effects to arise as a result of the Project – local people have raised concerns about potential environmental impacts and potential impacts on tourism. The Environmental Statement submitted alongside the Planning Application investigates the potential for effects on the environment – and indirect effects that this may have on tourism. No major adverse effects have been identified. DGL has put in place mitigation and enhancement measures, over and above those required simply to mitigate their direct effects. DGL's operations will be subject to the most stringent and rigorous regulatory standards and will continue to be frequently inspected by the appropriate agencies. DGL is committed to act as a steward for its land and community.

7.5.10 DGL is proposing a range of activities that would further boost the positive impacts of the Curraghinalt Project and mitigate the potential for adverse impacts. This will begin with the skills and supply chain strategies and will be complemented by the partnership with South West College. DGL is also committed to continued corporate sponsorship funding (to date, the Tyrone Fund has already invested £270,000 in community projects) and a separate Community Fund which will allow the wider community to continue to benefit from the Project. These interventions are likely to be secured through a S76 agreement with the NI Regional Government.

7.5.11 The benefits would be strongly felt within Owenkillew ward and FODC - and would be of a significant magnitude and reach to have Regional effects, especially with respect to GDP, exports and the trade deficit. Collectively, these impacts demonstrate that the Curraghinalt Project makes a large and lasting contribution to meeting Regional needs and core local and National policy objectives.

Appendices

APPENDIX 1: KEY ASSUMPTIONS & METHODOLOGY

a) Overview

1.1 The impacts of the scheme are a function of assumptions we have made on both the construction and operation of the Curraghinalt Project. This Appendix sets out the key assumptions for both, and how they influence the overall economic impact assessment of the scheme.

1.2 A full Feasibility Study has been commissioned by DGL and the results were announced in December 2016. This sets out projected quantity and sales value of the output of the Curraghinalt Project and estimates costs of construction and operation – and provides detailed sensitivity tests to demonstrate the potential impact in fluctuations of these variables. This assessment does not go into the same level of detail as the Feasibility Study, since the Feasibility Study is available to the public and decision makers on the DGL website. But the assumptions set out below are based on this robust Feasibility Study and DGL's detailed plan for investment and delivery of the Curraghinalt Project.

1.3 The most sensitive assumption we have used is the price of gold. In the Sensitivity Testing section of this Report, we present the potential effects of a change in the price of gold, looking at the effects of both a fall and rise of the sales value of gold on the expected benefits of the Project.

1.4 The methodology follows standard economic appraisal techniques and has been shaped by conversations with Department for the Economy officials (although the calculations and conclusions herein are Quod's own and Quod accepts responsibility for them accordingly.)

b) Production at the Mine

1.5 There are "Proven and Probable Mineral Reserves" of 1.44 million oz of gold and 0.66 million oz of silver at the Project Site. There is a high level of certainty that these minerals are available and accessible.

1.6 The Mineral Reserves are a subset of the total Mineral Resources that can be included in the mine plan. There are three different categories of Mineral Resources. Measured and Indicated Resources are higher confidence. These minerals are available and may be accessible and viable to extract under certain circumstances. There are an estimated 2.10 million oz of gold under this measure. Inferred Resources are lower confidence resources. There are 2.31 million oz at the Curraghinalt Project under this measure.

1.7 The mine is expected to be operational for at least 20 years, plus 5 years of decommissioning during which time an estimated 3,500 kilo ounces (koz) of gold and 736 koz of silver will be produced. Note that this time frame is different that the Feasibility Study of 10.3 years, since the Feasibility Study is based solely on the Mineral Reserves.

c) Sales Value

1.8 The central-case price of gold is US $1,250 per oz as is the case in the Feasibility Study. The Feasibility Study and this Report also test a lower gold price of US $1,150 per oz and a higher price of US $1,350. This Report presents the potential effects of a fall or a rise in the price of gold within these parameters. This is presented in the Sensitivity Testing section.

1.9 Silver is US $17 per oz. The effect of silver sales in the context of the Curraghinalt Project as a whole is minimal so sensitivity testing is not necessary.

d) Export Value

1.10 It is likely that all of the Curraghinalt Project's production will be exported. 100% export rates have been assumed in this Report.

e) Exchange Rate

1.11 All calculations have been undertaken using Pounds Sterling (£). An exchange rate of US $1.20 to £1.00 has been applied where assumptions were provided in $ US.

f) Capital Investment

1.12 The scale and nature of DGL's capital investment will determine the scale and nature of the economic impacts – including employment, Gross Value Added, supply chain and multiplier benefits to the local and NI economy.

1.13 As part of the Feasibility Study, DGL has done a detailed plan of the capital investment and the workforce that will be required to deliver the Curraghinalt Project within 18 to 24 months.

1.14 The Project will have a total construction cost of £160 million, including labour costs. This expenditure is broken down as follows:

Construction Expenditure: Pre-operation	
This includes:	**Expenditure in £**
Purchases (construction materials and contracting, utilities, business services, etc.)	£109,900,000
Labour costs (including on-costing and contracting costs)	£38,500,000
Contingency	£14,800,000
Total	**£160,100,000**

Figures may not sum due to rounding

1.15 The 18 to 24 month construction process will require 6,000 person-months of construction. The average headcount of people who work on-site over the 18-24 month period is approximately 270. A Construction Workforce Profile, which sets out the number and type of jobs that will be created on-site is set out in the Appendix 2 of this Report.

1.16 In addition to direct employment, construction expenditure will create further indirect jobs elsewhere in the supply chain. DGL has produced an estimate of how construction expenditure will be split between a range of Standard Industrial Classifications (as set out above). Quod has applied standard Office for National Statistics estimates of output per worker in each sector to turn that spending into an estimate of indirect jobs.

1.17 The spending power of construction employees will also create induced employment – for example in retail or leisure services, or other household spending. This has also been calculated using standard assumptions about spending and employment in the NI economy. It is acknowledged that some of this expenditure will be displaced from elsewhere, and this has been accounted for in these calculations.

g) Operational Impacts

i) Expenditure

1.18 The impacts that arise from the operational phase are determined by the amount of gold and silver that DGL extracts and the price at which it will sell. They also arise from the expenditure by DGL on the goods and services necessary for the operation of the Project.

1.19 As with the construction workforce, DGL has reviewed operational workforce requirements to identify the number and occupation of workers required to produce the target production. Again, a full profile of the operational workforce, by skill, is set out in the Operational Impacts section of this Report.

1.20 The Curraghinalt Project will have total annual operational costs of £66m. This expenditure includes labour and ongoing capital investment/maintenance costs. Annual operational expenditure is broken down as follows:

Annual Average Operational Expenditure	
This includes:	**Expenditure in £**
Construction materials & contracting (sustaining capital)	67.2%
Manufactured inputs	19.9%
Energy	7.9%
Purchase of administrative & financial services	4.7%
Logistics, transport of materials pre-and post-production, storage	0.4%
Total purchase expenditure inc. contingency	**£48,590,250**
Total Labour cost	£16,415,625
Grand Total	£65,662,500

Figures may not sum due to rounding

1.21 A full Economic Appraisal would include deadweight and displacement. In this case we estimate both to be zero – in the absence of the mine, the gold would not be extracted, so all effects are net additional to the economy. Resources required to deliver the project are relatively specialist so the economic activity of the mine and its construction would not be displacing activity that would otherwise be occurring somewhere else in the local or Regional economy.

h) Measuring indirect and induced effects (multipliers)

1.22 The multipliers used are not the standard ONS average multipliers for the UK. Quod has established a bespoke model to calculate the potential multipliers based on the projected employment and spending patterns set out by DGL. This means that, where indirect jobs are estimated, there is a direct relationship between the number of indirect jobs expected and the expenditure by DGL that will support them. Likewise with induced effects, the actual wage effect of DGL's activities has been considered with respect to how many jobs may be induced by the wage injection in the wider economy. The table below shows how the multipliers in this report differ from the industry standards, and gives a brief overview of why this might be the case.

Multiplier	Total Impact	Industry benchmarks	Suggested reason for difference
Construction Employment multiplier (TYPE 2)	2.79	2.0	Significantly higher expenditure stimulating other construction activities, which support a higher level of indirect employment
Construction Output Multiplier	1.74	1.9	Expenditure on manufactured goods and energy offering relatively low indirect GVA
Operational Employment multiplier (TYPE 2)	2.60	2.17	Significantly higher expenditure stimulating other construction activities, which support a higher level of indirect employment
Operational Output Multiplier	1.24	1.46	Expenditure on manufactured goods and energy offering relatively low indirect GVA

APPENDIX 2: WORKFORCE SKILL PROFILE

a) Construction

MINING	Number required (max of over construction period)	SOC GRADE	Likely skills required
Mine Superintendent (Expat)	1	1	Level 4+ or equivalent on-the-job experience
Maintenance Manager	1	1	Level 4+ or equivalent on-the-job experience
Technical Services Manager	1	1	Level 4+ or equivalent on-the-job experience
Technical Services Manager (Expat)	1	1	Level 4+ or equivalent on-the-job experience
Mine Administrative Assistant	1	4	Level 2-3 or equivalent on-the-job experience
Subtotal - Mining Management	4		
Mine Operations (Production)			
Shift Supervisor	4	5	Level 3 or equivalent on-the-job experience
Blasting Supervisor	4	5/2	Level 4+
Trainer (Expat)	4	3	Level 5
Blaster	8	8	Level 1-3, some on-the-job experience
Development Services/Shotcrete	8	5	Level 3
Waste Development Miner	8	5/3	Level 3+
LH Production Miner	4	5	Level 3+
Ore Development Miner	2	5	Level 3+
Scooptram Operator (Large)	8	8	Level 2+ or equivalent on-the-job experience
Scooptram Operator (Small)	1	8	Level 2+ or equivalent on-the-job experience
Haul Truck Operator	5	8	Level 2+ or equivalent on-the-job experience
Bolter Operator	8	8	Level 2+ or equivalent on-the-job experience
Grader Operator	4	8	Level 2+ or equivalent on-the-job experience
Nipper/Equipment Operator	-	8	Level 2+ or equivalent on-the-job experience
Subtotal - Mining Operations (Production)	**68**		
Mine Operations (Services)	-		

Backfill Helper	3	5	Level 3+ or equivalent on-the-job experience
Mine Electrician	4	5	Level 3+ or equivalent on-the-job experience
Subtotal - Mining Operations (Services)	**7**		
Mine Maintenance	-		
Maintenance Supervisor	1	5	Level 3 or equivalent on-the-job experience
Maintenance Planner	1	5	Level 3 or equivalent on-the-job experience
Heavy Equipment Mechanic	5	5	Level 3+ or equivalent on-the-job experience
Welder	4	5	Level 3+ or equivalent on-the-job experience
Electric/Hydraulic Mechanic	4	5	Level 3+ or equivalent on-the-job experience
Subtotal – Mine Maintenance	15		
Mining Technical Services	-		
Senior Mine Engineer	1	2	Level 5
Chief Geologist	1	2	Level 5
Ventilation Engineer	1	2	Level 5
Chief Surveyor	1	2	Level 5
Mine Surveyor	1	2	Level 5
Geologist	1	2	Level 5
Short Term Mine Planner	1	2	Level 5
Long Term Mine Planner	1	2	Level 5
Draftsman	1	2	Level 5
Subtotal - Technical Services	9		
Subtotal – Mining	103		
	-		
PROCESSING	**-**		
Process Operations	-		
Mill Operations Superintendent (Expat)	1	2	Level 5
Control Room Operator	1	5	Level 3+
Grinding/Regrind/Flotation Operator	1	5	Level 3+
Leach/Detox/Paste Operator	1	5	Level 3+
ADR Plant Operator	1	5	Level 3+
Tailings Filter Operator	1	5	Level 3+
Subtotal - Process Operations	6		
Process Technical Services	-		
Sr. Metallurgical Engineer (Expat)	1	2	Level 5

Subtotal - Process Technical Services	1		
Water Treatment Plant	-		
Water Treatment Plant Operator	4	8	Level 2+
Subtotal - Water Treatment Plant	4		
Subtotal – Processing	11		
	-		
G&A	-		
Management & Administration	-		
Mine/General Manager (Expat)	1	1	Level 5+
Site Administrator	1	2	Level 4+
Subtotal - Management	2		
Accounting	-		
Controller	1	2/3	Level 3+
Accounting & Taxes Manager	1	2	Level 4+
Accounting Coordinator	2	2	Level 4+
Subtotal – Accounting	4		
Human Resources & Training	-		
Human Resources Superintendent	1	2	Level 4+
Human Resources Coordinator	1	2	Level 4+
Trainer	2	2	Level 4+
Subtotal - Human Resources	4		
Community Relations	-		
Manager, External Affairs	1	1/2	Level 4+
Community Relations Coordinator	1	1/2	Level 4+
Subtotal - Community Relations	2		
IT & Communications	-		
IT/Telecom. Technician	2	3	Level 3+
Subtotal - IT & Communications	2		
Procurement & Logistics	-		
Procurement/Contracts/Logistics Manager	1	2	Level 4+
Procurement/Contracts Agent	1	3	Level 3+
Logistics Supervisor	1	3	Level 3+
Warehouse Operators	2	8	Level 2+ or equivalent on-the-job experience
Multi-Equipment Operator	1	8	Level 2+ or equivalent on-the-job experience
Subtotal – Logistics	6		
Health & Safety	-		
Health, Safety, and Security Manager	1	2	Level 4+
Health & Safety Coordinator	1	3	Level 3+

Subtotal - Health & Safety	2		
Environment	-		
Environmental Manager	1	2	Level 4+
Environmental Technician	2	3	Level 3+
Subtotal - Environment	3		
Security	-		
Security Officer (Gate/Mags, Full Time)	2	9	Level 1+ or equivalent on-the-job experience
Security Officer (Gold Room, Part Time)	-	9	Level 1+ or equivalent on-the-job experience
Subtotal - Security	2		
Facilities Management & Maintenance	-		
Site Services Foreman	1	8	Level 2+ or equivalent on-the-job experience
Electrician	1	5	Level 3+
Multi-Equipment Operator	1	8/9/5	Level 2+ or equivalent on-the-job experience
Skilled Labourers	2	8/9/5	Level 2+ or equivalent on-the-job experience
Subtotal - Surface Infrastructure & Maintenance	5		
Subtotal - G&A	32		
	-		
TOTALS - BY AREA	-		
Mining	103		
Processing	11		
G&A	32		
Other	30		
Total – LABOUR FORCE	176		
Construction Management	124	8/9/5	Level 2+ or equivalent on-the-job experience
Grand total	300		

b) Operation

MINING	Number required (max at any one time over operation period)	SOC GRADE	Likely skills required
Mine Management			
Mine Superintendent	1	1	Level 4+ or equivalent on-the-job experience
Mine Superintendent (Expat)	1	1	Level 4+ or equivalent on-the-job experience
Maintenance Manager	1	1	Level 4+ or equivalent on-the-job experience
Technical Services Manager	1	1	Level 4+ or equivalent on-the-job experience
Technical Services Manager (Expat)	1	1	Level 4+ or equivalent on-the-job experience
Mine Foreman	1	5/3	Level 4+
Mine Administrative Assistant	1	4	Level 2-3 or equivalent on-the-job experience
Subtotal - Mine Management	7		
Mine Operations (Production)			
Shift Supervisor	8	5	Level 3 or equivalent on-the-job experience
Blasting Supervisor	4	5/3	Level 4+
Trainer	16	2	Level 4+
Trainer (Expat)	8	3	Level 5
Blaster	8	8	Level 1-2, some on-the-job experience
Blasting Helper	0	8	Level 1-2, some on-the-job experience
Development Services/Shotcrete	10	5	Level 3+
Waste Development Miner	8	5-3	Level 3+
LH Production Miner	28	5	Level 3+
Ore Development Miner	40	5	Level 3+
Scooptram Operator (Large)	20	8	Level 2+ or equivalent on-the-job experience
Scooptram Operator (Small)	32	8	Level 2+ or equivalent on-the-job experience
Haul Truck Operator	32	8	Level 2+ or equivalent on-the-job experience
Bolter Operator	24	8	Level 2+ or equivalent on-the-job experience
Jackleg/Stoper Miner	0	8	Level 2+ or equivalent on-the-job experience

MINING	Number required (max at any one time over operation period)	SOC GRADE	Likely skills required
Grader Operator	4	8	Level 2+ or equivalent on-the-job experience
Nipper/Equipment Operator	8	8	Level 2+ or equivalent on-the-job experience
Subtotal – Mine Operations (Production)	250		
Mine Operations (Services)	0		
Paste Plant Operators	8	5	Level 3+ or equivalent on-the-job experience
Backfill Miner	4	5	Level 3+ or equivalent on-the-job experience
Backfill Helper	4	5	Level 3+ or equivalent on-the-job experience
Mine Electrician	8	5	Level 3+ or equivalent on-the-job experience
Subtotal – Mine Operations (Services)	24		
Mine Maintenance	0		
Maintenance Supervisor	1	5	Level 3 or equivalent on-the-job experience
Maintenance Planner	1	5	Level 3 or equivalent on-the-job experience
Heavy Equipment Mechanic	20	5	Level 3+ or equivalent on-the-job experience
Mechanic Helper	8	8	Level 2+ or equivalent on-the-job experience
Welder	8	5	Level 3+ or equivalent on-the-job experience
Electric/Hydraulic Mechanic	8	5	Level 3+ or equivalent on-the-job experience
Subtotal – Mine Maintenance	46		
Mining Technical Services	0		
Senior Mine Engineer	1	2	Level 5
Geotechnical Engineer	1	2	Level 5
Chief Geologist	1	2	Level 5
Ventilation Engineer	1	2	Level 5
Chief Surveyor	1	2	Level 5
Mine Surveyor	2	2	Level 5
Surveyor Helper	3	5	Level 3+ or equivalent on-the-job experience
Geologist	4	2	Level 5
Sampler	2	2	Level 5
Short Term Mine Planner	2	2	Level 5
Project Engineer	1	2	Level 5

MINING	Number required (max at any one time over operation period)	SOC GRADE	Likely skills required
Long Term Mine Planner	1	2	Level 5
Draftsman	2	2	Level 5
Subtotal - Technical Services	22		
PROCESSING			
Process Operations			
Mill Operations Superintendent (Expat)	1	2	Level 5
Operations Shift Foreman	2	5	Level 3+
Mill Admin Assistant	1	5	Level 3+
Control Room Operator	4	5	Level 3+
Crusher/FEL Operator	2	5	Level 3+
Grinding/Regrind/Flotation Operator	4	5	Level 3+
Leach/Detox/Paste Operator	4	5	Level 3+
ADR Plant Operator	4	5	Level 3+
Tailings Filter Operator	4	5	Level 3+
Reagent Helpers/Operator	4	5	Level 3+
Mill Labourer	6	8	Level 2+ or equivalent on-the-job experience
Subtotal - Process Operations	36		
Process Maintenance			
Maintenance Planner	1	5	Level 3 or equivalent on-the-job experience
Electrician Apprentice	2	8	Level 2+ or equivalent on-the-job experience
Electrician	2	5	Level 3+
Instrumentation Technician	1	5	Level 3 or equivalent on-the-job experience
Millwright	2	8	Level 2+ or equivalent on-the-job experience
Subtotal - Process Maintenance	8		
Process Technical Services	0		
Sr. Metallurgical Engineer (Expat)	1	2	Level 5
Metallurgical Engineer (Process Control)	1	2	Level 5
Metallurgical Technician	1	2	Level 5
Subtotal - Process Technical Services	3		
Water Treatment Plant			
Water Treatment Plant Operator	4	8	Level 2+
Tailings Management			
Heavy Equipment Operator	4	8	Level 2+

MINING	Number required (max at any one time over operation period)	SOC GRADE	Likely skills required
Subtotal – Processing	55		
G&A			
Management & Administration			
Mine/General Manager (Expat)	1	1	Level 5
Site Administrator	1	2	Level 4+
Accounting			
Controller	1	2/3	Level 3+
Accounting & Taxes Manager	1	2	Level 4+
Accounting Coordinator	2	2	Level 4+
Human Resources & Training			
Human Resources Superintendent	1	2	Level 4+
Human Resources Coordinator	1	2	Level 4+
Trainer	16	2	Level 4+
Community Relations			
Manager, External Affairs	1	2/3	Level 4+
Community Relations Coordinator	1	2/3	Level 4+
IT & Communications			
IT/Telecom. Technician	2	3	Level 3+
Procurement & Logistics			
Procurement/Contracts/Logistics Manager	1	2	Level 4+
Procurement/Contracts Agent	1	3	Level 3+
Logistics Supervisor	1	3	Level 3+
Warehouse Operators	2	8	Level 2+ or equivalent on-the-job experience
Multi-Equipment Operator	1	8	Level 2+ or equivalent on-the-job experience
Health & Safety			
Health, Safety, and Security Manager	1	2	Level 4+
Health & Safety Coordinator	2	3	Level 3+
Environment			
Environmental Manager	1	2	Level 4+
Environmental Technician	2	3	Level 3+
Security			
Security Officer (Gate/Mags, Full Time)	2	9	Level 1+ or equivalent on-the-job experience
Security Officer (Gold Room, Part Time)	0.2	9	Level 1+ or equivalent on-the-job experience

MINING	Number required (max at any one time over operation period)	SOC GRADE	Likely skills required
Facilities Management & Maintenance			
Site Services Foreman	1	8	Level 2+ or equivalent on-the-job experience
Electrician	2	5	Level 3+
Multi-Equipment Operator	1	8	Level 2+ or equivalent on-the-job experience
Skilled Labourers	2	8/9	Level 2+ or equivalent on-the-job experience
Subtotal - G&A	48		
TOTALS - BY AREA			
Mining	349		
Process	55		
G&A	48		
Total positions over course of project	**452**		
Full time jobs at any one time	**350**		

APPENDIX 3: SENSITIVITY TESTING

1.1 There is potential for a variance around some of the figures used in these calculations.

1.2 Quod has therefore run a series of sensitivity tests based on the following variations:

- Lower case: A gold price of US $1,150/oz (or a strengthening of the pound to £0.77 to the $US)
- Central Case: A gold price of US $1,250/oz
- Upper case: A gold price of US $1,350/oz (or a weakening of the pound to £0.90 to the $US)

1.1 The gold price at the time of writing is US $1,264[79]. The gold price fluctuates constantly but the variability over the past 5 years has been between approx. $1,060 and $1,780[80], with this peak and trough sustained for only a matter of days. The test cases set out above are therefore reasonable test cases falling within the likely parameters.

1.2 In addition, the majority of gold mines globally have lower grade ore than that at Curraghinalt, and are therefore typically processing ore with a lower return per tonne. In general, the economics of this project are above average. On this level, Curraghinalt should be less vulnerable to lower gold price fluctuation.

1.3 The construction and operational expenditure forecasts have in-built contingency to cover abnormal or unexpected costs, so we have not tested the possibilities of higher input costs.

1.4 Silver is US $17 per oz. The effect of silver sales in the context of the Curraghinalt Project, as a whole, is minimal (less than 0.4% by value) so sensitivity testing has not been progressed.

Impact	Central Case Impact	Upper Case	Lower case
Total construction investment pre-operation	£160m	No change	No change
Total Purchases	£109.9m	No change	No change
Total Labour Cost	£38.5m	No change	No change
Employment			
Direct jobs (1 year)	500	No change	No change
Indirect Jobs (1 year)	725	No change	No change
Induced Jobs (1 year)	170	No change	No change

TOTAL (1 year)	1,400	No change	No change
Employment multiplier (TYPE 1)	2.45	No change	No change
Employment multiplier (TYPE 2)	2.79	No change	No change
GVA			
Direct	£64.0m	No change	No change
Indirect	£39.5m	No change	No change
Induced	£8.1m	No change	No change
TOTAL	£111.6m	No change	No change
Output Multiplier (TYPE 1)	1.62	No change	No change
Output Multiplier (TYPE 2)	1.74	No change	No change
Tax			
	£14.4m	No change	No change
Operational Summary:	Annual impact		
Sales price	$US 1,250/oz	US $1,150/oz	US $1,350/oz
Total Annual Sales Revenue (assuming demand is non-elastic within this price range)	$4.37m	$4.02m	$4.72m
Employment			
Direct Employment (average)	350	No change	No change
Indirect Employment	520	No change	No change
Induced Employment	100	No change	No change
Indirect + Induced	620	No change	No change
TOTAL employment	1,000	No change	No change
Employment multiplier (Type 2)	2.60	No change	No change
Investment			
Total expenditure	£65.6m	No change	No change
Total Purchases	£48.6m	No change	No change
Total Labour Cost	£16.4m	No change	No change
GVA			
Direct	£120.2m	£105.1m	£134.2m
Indirect	£24.1m	No change	No change

Induced	£4.6m	No change	No change
TOTAL	£149m	£133.7m	£162.9£
Output Multiplier (Type 2)	1.24	1.29	1.20
Other			
Tax	£12m	Potential increase or decrease proportionate to profit	Potential increase or decrease proportionate to profit
Gold Exports	£182.1m	£167.6m	£196.7m
Silver Exports	£567,000	£567,000	£567,000
Reduction in NI trade deficit	3.0%	2.8%	3.2%
Community Fund Investment	£2m +£100,000 p.a.	No change	No change

1.5 As would be expected, a reduction in sales value reduces the total value of Curraghinalt output and therefore the value of exports and indirect output. An increase in sales value has the opposite effect. The increase and reduction is roughly proportionate to the increase or reduction in sales value.

1.6 However, the magnitude of these effects is such that, even with a reduction of sales value by 8%, the impact on GVA and the trade deficit is still substantial enough to register and make a significant contribution at a Regional level.

References

References

[1] Galantas Mining Company is operational in Omagh, but not on this scale

[2] Owenkillew is the name of the ward and the Super Output Area in which the Proposed Mine is located. It is named for the River of the same name which runs through it. Owenkillew Ward will be used to refer to the ward or the SOA. The River will be referenced specifically as the Owenkillew River.

[3] All publicly known FDI since 2013, published by Invest NI

[4] Northern Ireland is referred to as a “Region” of the United Kingdom. Northern Ireland (NI) and the Region/Regional are used interchangeably in the report.

[5] This relates to the growing of crops, rearing of animals and fishing/aquaculture. It does not include food manufacture and processing.

[6] total initial Capex and sustaining Capex investment and decommissioning costs over 25 years, discounted at 3.5% p.a.

[7] NPV of total initial Capex and sustaining Capex investment discounted at 5%

[8] to be submitted under Section 26 of the Planning (NI) Act 2011

[9] Northern Ireland Executive, 2016. Programme for Government Consultation Document p.12-14

[10] also known as Owenkillew Lower Super Output Area for statistical purposes

[11] NISRA, Census 2011

[12] 2 km from the centre of the Proposed Infrastructure Layout

[13] Northern Ireland Executive, 2016. Programme for Government Consultation Document

[14] Northern Ireland Executive, 2016. Programme for Government Consultation Document p. 78

[15] FODC, 2016. Local Plan Preferred Options. p.24

[16] Department for the Economy NI, 2017. Economy 2030: a consultation on an Industrial Strategy for Northern Ireland. p.11

[17] FODC, 2016. Fermanagh and Omagh Community Plan 2030 p.12

[18] FODC, 2016. Local Plan Preferred Options para 8.5

[19] Included agriculture, forestry and fishing, although the latter two are not significant here in comparison.

[20] Department for the Environment NI, 2015. Strategic Planning Policy Statement for Northern Ireland (SPPS): Planning for Sustainable Development. Para 4.19

[21] Northern Ireland Executive, 2016. Programme for Government Consultation Document p. 89

[22] Department for the Economy NI, 2017. Economy 2030: a consultation on an Industrial Strategy for Northern Ireland.

[23] Northern Ireland Executive, 2016. Programme for Government Consultation Document p. 79

[24] Annual Survey of Hours and Earnings 2016

[25] The **standard output** of an agricultural product (crop or livestock), abbreviated as **SO**, is the average monetary value of the agricultural output at farm-gate price, in euro per hectare or per head of livestock. Statistics from the Northern Ireland Agricultural Census 2015

[26] Annual Population Survey 2016

[27] Department for the Economy NI, 2017. Economy 2030: a consultation on an Industrial Strategy for Northern Ireland. Para 3.6

[28] Department for Employment and Learning NI et al., 2015. Enabling Success: Supporting the Transition from economic inactivity to employment. p.4

[29] Young people who are not in education, employment or training

[30] FODC, 2016. Fermanagh and Omagh Community Plan 2030 p.21

[31] Department for the Economy NI, 2017. Economy 2030: a consultation on an Industrial Strategy for Northern Ireland. p.37

[32] Department for the Economy NI, 2017. Economy 2030: a consultation on an Industrial Strategy for Northern Ireland. p.42

[33] FODC, 2016. Fermanagh and Omagh Community Plan 2030 p.36

[34] FODC, 2016. Fermanagh and Omagh Community Plan 2030 p.36

[35] NISRA, 2014, Enterprise/local units by Employment size band and Northern Ireland Local Authority Districts

[36] NISRA, 2016, Northern Ireland Composite Economic Index (NICEI)

[37] NISRA, 2016, Northern Ireland Composite Economic Index (NICEI)

[38] Northern Ireland Executive, 2016. Programme for Government Consultation Document p. 19

[39] Northern Ireland Executive, 2016. Programme for Government Consultation Document p. 19

[40] Measured in Gross Value Added – GVA

[41] NISRA, 2016, Northern Ireland Composite Economic Index (NICEI)

[42] The Northern Ireland Statistics and Research Agency produces Northern Ireland Composite Economic Index (NICEI). It is an experimental quarterly measure of the performance of the NI economy based on available official statistics. It is not possible to provide a comprehensive measure of quarterly Gross Domestic Product (GDP) for NI due to the lack of suitable data sources. Comparisons with UK GDP measures are therefore approximate. However, the NICEI provides an appropriate short term indicator for the NI economy in advance of more complete figures from other sources such as annual Regional Accounts information for NI from ONS.

[43] Department of Enterprise, Trade and Investment NI, 2016. Export Matters: Enabling the conditions for increasing external sales and exports in Northern Ireland. p.7

[44] Department of Enterprise, Trade and Investment NI, 2016. Export Matters: Enabling the conditions for increasing external sales and exports in Northern Ireland. p.7

[45] Department of Enterprise, Trade and Investment NI, 2016. Export Matters: Enabling the conditions for increasing external sales and exports in Northern Ireland. p.5

[46] Department for the Economy NI, 2017. Economy 2030: a consultation on an Industrial Strategy for Northern Ireland. Para 3.9

[47] These small economies include: Scotland, Northern Ireland, Estonia, Israel, New Zealand, Denmark, Republic of Ireland, Finland and Singapore

[48] Department for the Economy NI, 2017. Economy 2030: a consultation on an Industrial Strategy for Northern Ireland. Para 5.42

[49] Department for the Economy NI, 2017. Economy 2030: a consultation on an Industrial Strategy for Northern Ireland. Para 5.40

[50] Department for the Economy NI, 2017. Economy 2030: a consultation on an Industrial Strategy for Northern Ireland. Para 5.43

[51] FODC, 2016. Fermanagh and Omagh Community Plan 2030 p.17

[52] Department for the Economy NI, 2017. Economy 2030: a consultation on an Industrial Strategy for Northern Ireland. Para 1.6

[53] NPV of total initial Capex and sustaining Capex investment discounted at 3.5%

[54] Figures provided by Invest NI

[55] A Full Economic Appraisal includes deadweight and displacement. In this case we estimate both to be zero – in the absence of the mine, the gold would not be extracted, so all effects are net additional to the economy. Resources required to deliver the project are relatively specialist so the economic activity of the mine and its construction would not be displacing activity that would otherwise be occurring somewhere else in the local or Regional economy.

[56] Northern Ireland Executive, 2016. Programme for Government Consultation Document p. 79

[57] Leakage has not been directly assessed either as DGL is not undertaking a Green Book Appraisal which would be applicable in the case of public funds investment. Leakage is implicitly assessed when estimating local impacts.

[58] Northern Ireland Statistics and Research Agency, 2011, Census

[59] FODC, 2016. Fermanagh and Omagh Community Plan 2030 p.36

[60] NISRA, 2014, Enterprise/local units by Employment size band and Northern Ireland Local Authority Districts

[61] Annual Population Survey 2016

[62] Department for Employment and Learning NI et al., 2015. Enabling Success: Supporting the Transition from economic inactivity to employment. p.4

[63] as of end April 2017

[64] Annual Survey of Hours and Earnings 2016

[65] Quod, 2017, DGL investment model

[66] Measured in Gross Value Added – GVA

[67] Including all extractive industries

[68] This relates to the growing of crops, rearing of animals and fishing/aquaculture. It does not include food manufacture and processing.

[69] NISRA, 2015, Regional gross value added (income approach) reference tables

[70] FODC, 2016. Fermanagh and Omagh Community Plan 2030 p.12

[71] Export Matters: Enabling the conditions for increasing the external sales and exports in Northern Ireland, March 2016

[72] Department of Finance Ni, 2015, Northern Ireland Net Fiscal Balance Report 2012-13 and 2013-14

[73] This number is an estimate based on the memberships of the three main anglers clubs licensed to fish the Owenkillew: Gaff Anglers, Omagh Anglers and the Blakiston Houston Estate

[74] Department of Agriculture, Environment and Rural Affairs (Northern Ireland), Sperrin AONB, https://www.daera-ni.gov.uk/articles/sperrin-aonb accessed 04.01.17

[75] The Planning (Management of Waste from Extractive Industries) Regulations (Northern Ireland) 2015

[76] Department for the Economy NI, 2017. Economy 2030: a consultation on an Industrial Strategy for Northern Ireland. p.11

[77] NPV of total initial Capex and sustaining Capex investment discounted at 5%

[78] HM Government, 2017. Green Paper: Building our Industrial Strategy p.107-108

[79] https://www.bullionvault.com/gold-price-chart.do 31.05.17

[80] https://www.bullionvault.com/gold-price-chart.do 31.05.17

Statement of Economic Impacts

for the Curraghinalt Gold Project, County Tyrone, Northern Ireland

October 2017