



PROPOSED ALLOCATION OF LAND AT LLANDDULAS QUARRY IN THE REPLACEMENT LOCAL DEVELOPMENT PLAN (RLDP) FOR CONWY

PLANNING AND ENVIRONMENTAL SUMMARY REPORT

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- 1) FCC Environment UK Limited (FCC) are proposing the allocation of land at Llanddulas Quarry and Waste Management Complex (the Complex) in Conwy County Borough Council's (CCBC's) Replacement Local Development Plan (RLDP). This process commenced with the formal promotion of land at the former quarry in the Council's 'Call-for-Sites' exercise in 2018.
 - 2) Following the call for sites exercise, FCC have remained in continued engaged with Conwy Council regarding:
 - i. the amount of land that is available for development;
 - ii. the type and scale of development that could be accommodated at the Site;
 - iii. the extent to which the site could contribute to meeting an identified need for employment and low carbon development during the life of the RLDP; and
 - iv. the sites suitability and deliverability for allocation in the RLDP.
 - 3) Having considered the submitted details CCBC are proposing to allocate land at the Complex for employment use in the forthcoming RLDP. They have also identified the potential for the supply of renewable energy to the future allocation through the development of ground mounted solar panels and an associated Battery Energy Storage System (BESS) on other land within the Llanddulas complex.
 - 4) The Site was not considered for allocation in the Preferred Strategy Stage of the RLDP preparation which was consultation upon in 2019. This was due to a number of factors including the relative need and availability of employment land at the time and that the site was initially proposed for other land uses. The need for employment land to meet the council's needs arose following consultation on the Preferred Strategy in 2019 and the Site was seen as having the potential to be a sustainable, viable and deliverable solution to meet the CCBC's long term employment needs.
 - 5) Following the decision to put the Site forward for allocation in the forthcoming Deposit stage of the RLDP, CCBC have engaged in consultation with key technical consultees, other key stakeholders and residents. FCC has supported this process through the preparation of the technical / environmental site assessments needed to confirm the suitability of the Site for allocation.
 - 6) The outcome of engagement with technical consultees is summarised within this document. The outcome of the public and stakeholder consultation and CCBC's
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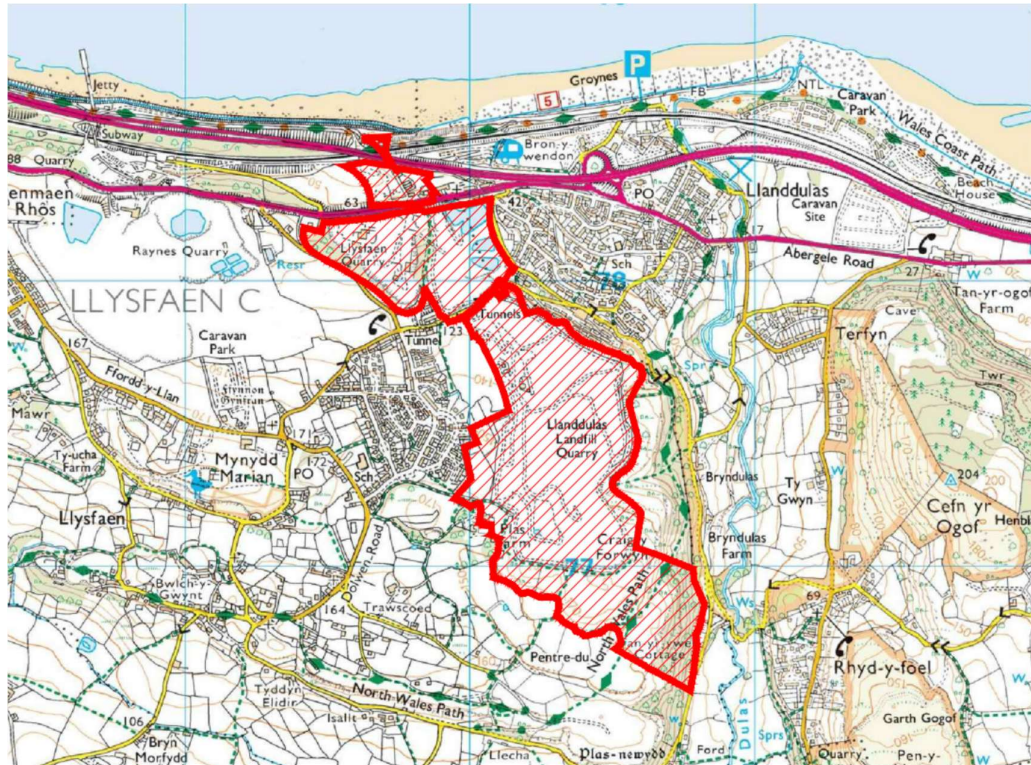
response to the comments raised during that process, is set out separately within the stakeholder consultation reports.

- 7) .
- 8) The purpose of this document is to provide deposit stage consultees on the RLDP with details of the site, the development proposals, and the conclusions of the technical and environmental assessments that have been carried out to inform the site allocation process. It also confirms the outcome of consultation with key technical and environmental specialists regarding the suitability of the site any key constraints and how they are to be addressed in the planning policy supporting the site allocation.

The Site

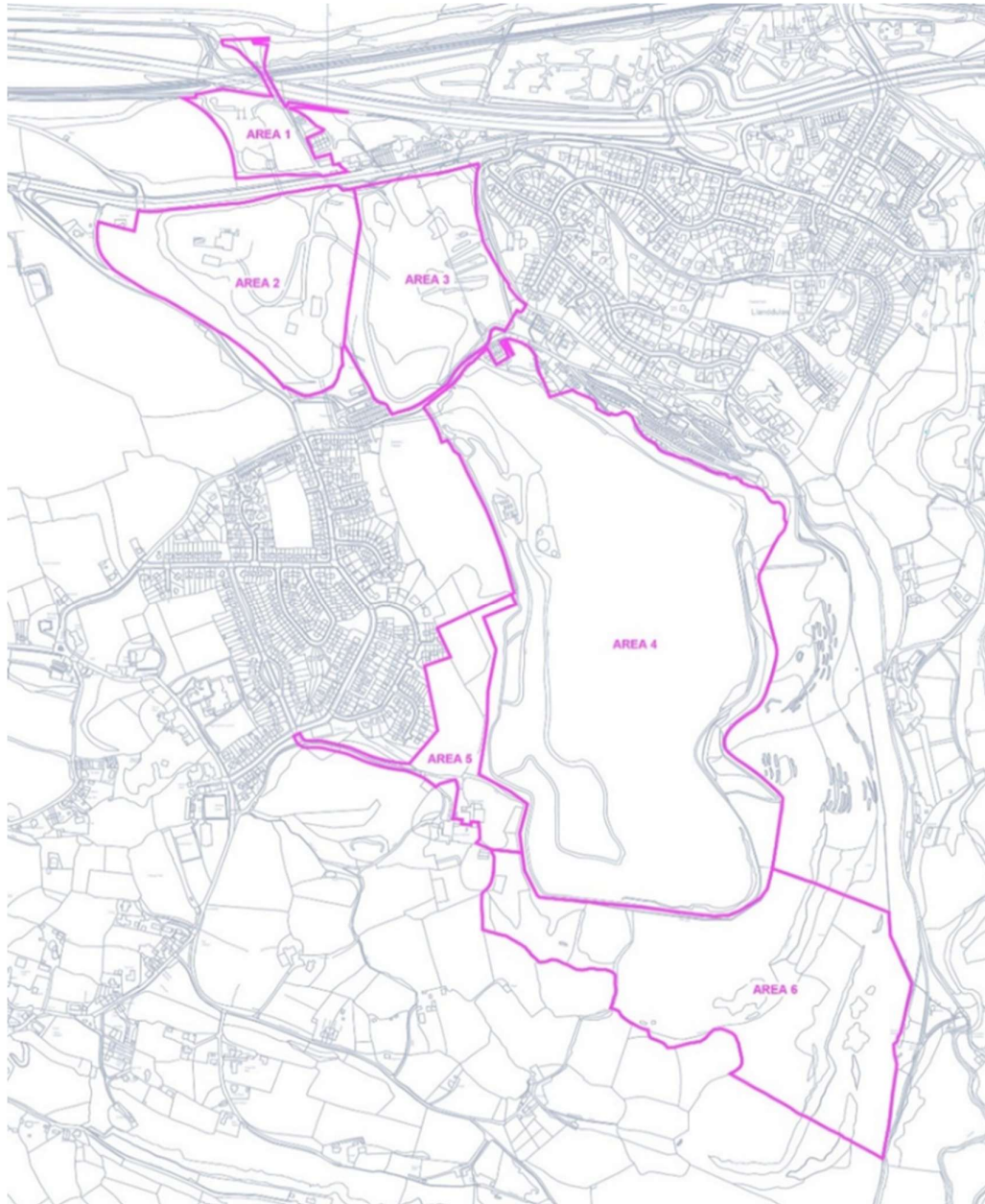
- 9) The Complex is located adjacent to the main Llanddulas settlement. The site has a long history of quarrying, block and brick manufacturing, landfill and waste management activity. It currently accommodates a landfill site and other waste management uses, which including a materials recycling facility (MRF) and an open windrow composting (OWC) facility. Mineral reserves remain within the former quarry but are not actively being worked., their export from site is currently prohibited by a S.106 Legal Agreement. The Complex also includes significant areas of disturbed / previously developed land, without a current use.
- 10) The complex extends to approximately 85 hectares in total. It is accessed from the A547 Abergele Road which meets the A55 North Wales Expressway approximately 600m north-east of the main site access. The location of the complex is shown in Figure 1 below.

Figure 1 – Site Location and Context



- 11) The Llanddulas Complex can be broadly divided into six areas, illustrated in Figure 2 below. Only areas 1 - 4 are being considered for allocation. However, other areas may be used in connection with, or as a consequence of, the proposed allocation, including the provision of biodiversity net gain or the replacement of existing waste management infrastructure. For completeness all 6 areas are described below.

Figure 2 The Llanddulas Complex



12) Each area is described in more detail below.

- i. Area 1 (Land to the North of A547) is located between the A547 and A55 and previously accommodated the Lime Kilns and conveyor system from the quarry to the storage silo and load-out jetty. The area contains a mixture of hardstanding, retaining walls and scrub vegetation and has two levels joined by a ramp. The upper level is within the southern part of Area 1, adjacent to Abergele Road (A547), the lower part is within the central and northern part of

- Area 1. The latter slopes gently towards the A55(T), which sits on an elevated deck which over-sails part of the site.
- ii. Area 2 (Former Blockworks Site) is located to the west of the main site access and comprises a previously excavated part of the quarry, with sheer stone walls on all sides. The internal area is split over two levels, linked by an access ramp. There are existing (redundant) portal framed buildings on the upper level and a brick-built and portal frame buildings and open storage and waste processing areas on the lower level. Area 2 is allocated for Waste Management use in the adopted Conwy Local Development Plan (LDP). It is currently occupied by Hogan Waste who carry out a range of waste management processes. The perimeter of Area 2 is vegetated with scrub.
 - iii. Area 3 (Former Silt Lagoons) is located to the east of the main site access and in part comprises a series of historic silt lagoons which have filled with water and now form a single waterbody in the northern part of the Area. The more elevated southern part of this Area has been largely restored through a combination of natural regeneration and planting.
 - iv. Area 4 (Landfill, Composting and former Quarry) is located within the central part of the wider site, to the south of Pentregwyddel Road. It contains the operational landfill site and associated operations, the former quarry void and an open windrow composting operation. This area of the site is accessed via an existing spine road that runs between Areas 2 and 3, before passing through a tunnel under Pentregwyddel Road. Landfill operations have ceased within the northern part of this area, which is largely restored, final landfill restoration operations are being carried out within the central part of this Area. The compost pad is located within the south-west corner of this Area and the quarry void is in the south-east corner.
 - v. Area 5 (Plas Farm and Land to the East of Llysfaen) is located to the west and south of the landfill site and to the east and south of Llysfaen. The northern part of Area 5 comprises two fields edged by broadleaved trees. The southern part of this Area accommodates the Plas Farm complex, comprising a derelict farmhouse and outbuildings, walled gardens and fields. The farmhouse is currently the subject of a planning application seeking to return it to an active residential use.
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- vi. Area 6 (Land to the South of the Former Quarry) comprises a series of fields and pasture and is located to the south of Area 5. Parts of this Area are covered by the extant planning consent for mineral extraction at the site. However, it has never been actively worked and remains undisturbed.

The Proposals

- 13) CCBC has identified that approximately 16.4ha of employment land is required to meet their needs over the plan period. Of the 16.4ha required, around 7.4ha of additional employment land is needed for allocation in the RLDP, with the rest already accounted for via existing commitments, completions, and viable vacancies. The Council had identified a site capable of meeting 3.5ha of this shortfall. However, its delivery is not certain and, thus, there is a need for another site to provide between 4ha and 7.5 ha of employment land across the plan period. The greater amount would be required should there be any issues with the delivery / viability of the other site that has been put forward for allocation or any of the committed developments.
- 14) In addition to the need for additional employment land, the Council's Local Area Energy Plan (LAEP) has identified that they need to 'rapidly scale up' the level of onshore renewables, particularly ground based solar, to meet the County's future energy demands. The LAEP confirms that an unprecedented scale of change and investment in buildings, transport and energy infrastructure is needed if the Council is to meet its Net Zero targets.
- 15) In their meetings with FCC, CCBC has confirmed that there is no specific need to allocate land for additional Waste Management facilities in the RLDP. However, there remains a need to maintain existing provision and for there to be locations where additional waste management infrastructure could be developed in the future.
- 16) These factors have played a part in the discussions between FCC and CCBC and in the formulation of the proposed allocation at Llanddulas.

Areas 1, 2 and 3

- 17) It is proposed that areas 1, 2 and 3 are allocated for a mixture of employment use (Planning Use Class B1, B2 and B8) and Sui-generis waste management use.
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- 18) Area 1 is sloping and includes the remnants of built infrastructure that serviced the former mineral extraction operations at Llanddulas Quarry. The ability to access this Area from the A547 is also constrained and whilst improvements can be made, it may not be possible to make it suitable for a significant number of larger Heavy Goods Vehicle (HGV) movements . Taking these constraints into account, the Area can provide between 0.8ha - 1ha of new employment land within either planning use class B1 (office) or B2 (industrial) for start-up units.
- 19) Areas 2 and 3 comprise former, quarry voids. The former includes a series of plateaus with interconnecting ramps, and the latter includes a waterbody and has been the subject of formal restoration in accordance with the approved mineral restoration scheme. Most of Area 2 is not included within the mineral consent and is not the subject of formal restoration requirements.
- 20) Whilst parts of Area 2 are already suitable for some built development¹, in order to make them suitable to meet CBBC's employment needs, it would be necessary to carry out comprehensive enabling works in each Area. This would include dewatering of the existing waterbody in Area 3 and the creation of development platforms in both Areas 2 and 3 .
- 21) FCC have explored various options for the creation of development platforms through the use of existing on-site material (minerals / rock) and importation of inert material. Using such material, it has been confirmed that it would be possible to create a development platform of between 3.2ha - 4.6ha in Area 2 and 3ha - 4ha in Area 3.
- 22) The existing access to Areas 2 and 3 already accepts a significant number of HGV's. However, improvement works are proposed to improve access for all types of vehicles. This would include excavation of part of the rock outcrop immediately to the south of the main site access.
- 23) Based upon current projections it is anticipated that Area 1 would be available for development within 1-2 years of the RLDP being adopted, Area 2 would be available within 4 - 5 years of the RLDP being adopted and Area 3 would be available 4 - 5

¹ It already contains Hogan Wastes buildings and operations

years later. Consequently, Areas 1-3 would be capable of delivering circa 4ha - 5.5ha of employment land within the first 5 -6 years of the RLDP being adopted and approximately 8ha - 9.5ha within 10 -11 years of its adoption.

- 24) Based upon the above, Areas 1-3 should be capable of meeting the entire 4ha – 7.4ha shortfall in employment land identified in the evidence base to the RLDP with most of the shortfall being met within 5 – 6 years of the Plan being adopted.

Area 4

- 25) Area 4 is also proposed for inclusion in the employment allocation.
- 26) FCC have been investigating the potential for ground based solar development at a number of landfill sites across the UK, with a number of solar sites either operational or the subject of planning applications. Given the identified need for such development within the Council's Local Area Energy Plan (LAEP), FCC offered to assess whether the restored landfill site would be suitable for solar development.
- 27) FCC made a formal request to the District Network Operator (DNO) to ascertain whether it is possible to obtain a connection to the local grid network and, if so, the cost of installing a grid connection at the site. The DNO subsequently confirmed that it would not be possible to connect to the local grid in Llanddulas due to a lack of capacity and the nearest point of connection that could be considered is via the St Asaph grid.

FCC's technical advisors have subsequently confirmed that it would not be financially or technically feasible to connect a solar development to the St Asaph grid at this time until grid improvement works are made.

- 28) Whilst it is not possible to secure a conventional solar scheme at the site, it would be technically feasible for a solar scheme to provide a 'direct wire' connection to the employment allocation and future employment development within Areas 1-3.
- 29) FCC have prepared some broad calculations on the average energy needs that could reasonably be expected following completion of the proposed allocation at Llanddulas. The calculation has been based upon a gov.uk source for EPC ratings by building type which can be used to generate an average energy usage in kWh
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per year for each m² of floor space. The calculation is set out in Table 1 below and is based upon the following broad assumptions:

- Area 1 would only comprise B1 uses;
- The split of B1 and B2/B8 on Areas 2 and 3 would be 25% / 75%;
- 50% of the developable areas (development platforms) would contain floorspace.

Table 1: Estimated Energy Needs of the Proposed Allocation at Llanddulas

Area	Usage	Floorspace	KWh / m ²	GWh total
Area 1	B1	5,000m ²	258	1.29
Area 2 + 3	B1	8,125 m ² (25% of 3.25ha)	258	2.10
Area 2 + 3	B1 / B2 / B8	24,375 m ² (75% of 3.25ha)	288 (avg of averages)	7.02
			Total:	10.41

30) FCC have identified two options for the delivery of solar on the former landfill site. Option 1 would fit within the approved landfill restoration plan, whereas Option 2 would require revisions to the approved restoration arrangements to facilitate a larger solar development with greater generation potential.

31) The anticipated energy generation for each option is summarised below. This is again based upon average solar generation figures and takes no account of continued advancements in solar generation technology (which is significant).

1. Option 1 would have an installed capacity of approximately 4MW and generate about 4GWh per annum.
2. Option 2 would have an installed capacity of approximately 7.6MW and generate about 7.6GWh per annum.

32) Under Option 1 there would be a 6MW shortfall in generation compared to the expected energy requirements of the proposed allocation. Under option 2 the shortfall would reduce to less than 3MW. Part of the shortfall could be made up from roof mounted solar on the B1, B2 and B8 units and it is assumed that, conservatively, a further 2MW / 2GWh of additional generation could be generated using roof mounted solar. Therefore, the total combined generation for Option 1 would be in

the region of 6GWh per annum, and Option 2 would be circa 9.65 GWh. The former would fall short of meeting the anticipated energy use. However, the latter, particularly if it was combined with battery storage, has the potential to come much closer to meeting the site's energy demands.

- 33) As noted previously Area 4 also contains the existing site offices, landfill gas plant, leachate treatment plant and open windrow composting facility. These facilities perform an important strategic role in the management of waste in North Wales and Conwy. Accordingly, it is proposed that this area is also specifically identified for waste management use in the RLDP. Given the evolving nature of waste management and the need to divert waste from landfill and recycle more the allocation should include for such operations, particularly if Hogan Wastes operations need to be relocated to allow the construction of the development platform in Area 2

Area 6

- 34) Using solar to generate hydrogen is also a possibility in future years, the hydrogen market in North Wales is in its infancy as it develops (as it is expected to) this may be a viable use for the site.

Environmental and Technical Considerations

- 35) Areas 1, 2 and 3 were put forward as part of the Council's Call for Sites consultation in 2018, with the Council subsequently confirming (in December 2018) that those areas were to be taken forward to the next stage of the plan making process.
- 36) Each of the candidate sites put forward for inclusion in the RLDP has been the subject of a multi-stage site assessment process by CCBC. The first stage is a desk-based assessment of each site to identify whether they are the subject of any fundamental constraints to development. The next stage involved consultation with statutory bodies and the North Wales Mineral and Waste Planning Service (NWM&WPS).
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37) Based upon the desk-based assessment work and consultations that CCBC have carried out thus far, the following conclusions can be drawn regarding the potential environmental and technical constraints to the site's allocation:

- It is a suitable size and location for future development.
- It is within flood Zone 1 and is not at risk from flooding.
- It is not the subject of any land use designations or land use constraints that would fundamentally restrict future development.
- Future development should not impact on registered heritage features. However, it is important to note that there may be some features of heritage importance within the site, that need to be considered in the context of any future development proposals. Principally the remnants of the kiln on the land to the north of the A547. (It should be noted that the development within this area would not directly impact on the kiln and should result in betterment to its setting).
- There are no in principle highways objections, but it is noted that improvements are proposed to the A547 to facilitate the development and any impacts on highway capacity and safety can only be determined following detailed assessment.
- The site is unlikely to have any significant ecological constraints but there could be some ornithological interest if the vertical faces of the quarries are affected.
- There is potential for parts of the site to be used for Biodiversity Net Gain.

38) The Council's initial assessment of the site indicates that the proposed employment allocation is unlikely to be the subject of any significant environmental or technical constraints.

39) Whilst the Council's initial assessment of the site is positive, it is only based upon a desk-based assessment of areas 1-3. With this in mind, and to provide the Council with more detailed information to inform the site allocation process, FCC has commissioned a series of assessments: they comprise:

- A detailed highways assessment.
 - an ecology assessment.
 - a heritage appraisal.
 - assessments regarding the technical and financial viability of the proposed development platforms, and
 - a report regarding the commercial viability of employment related development within Areas 1-3.
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- 40) The assessments have also been the subject of consultation with relevant consultees to verify its overall suitability for development in advance of its formal inclusion in the Deposit RLDP. The outcome of the assessments and any subsequent engagement with consultees is summarised below.

Traffic and Transportation

- 41) FCC has commissioned a Highways Technical Note - HTN to advise them on suitable access arrangements to serve the site, were it to be allocated for employment related development in the RLDP. The report also provides an indicative assessment of the likely traffic generation associated with the continuation of waste management operations at the site and the introduction of employment related development within Areas 1-3.
- 42) The HTN demonstrates that it is possible to develop an improved and suitable site access junction to the northern side of the A547 Abergele Road to access the northern parcel of the site (Area 1) and an upgraded junction on the southern side of Abergele Road to access the southern parcels (Areas 2 and 3) and the existing waste management operations (landfill and compost facility). It also demonstrates that the anticipated traffic generation would not give rise to any issues in terms of highways capacity. It concludes that there are no transport-related reasons why the site should not be taken forward and / or allocated in the emerging RLDP.
- 43) Both Conwy Council Highways and Welsh Government Highways have been consulted regarding the proposed allocation. Neither has raised any fundamental objection to the proposals. Conwy Council Highways raised some technical queries site access arrangements and surrounding infrastructure, but it was noted that these concerns were not insurmountable and could be dealt with in a planning application for the future redevelopment of the site. Similarly, the Welsh Government Highways raised no formal objection but noted some of the detail that they would expect to be contained in support of a future planning application for the proposed development.
- 44) A copy of the HTN can be made available on request.

Ecology

45) In 2017 / 2018 Areas 1, 2 and 3 of the Llanddulas site were the subject of habitat and protected species surveys including: breeding and wintering birds, great crested newt (eDNA), invertebrates, reptiles, badgers, and bats. Following discussions with CCBC regarding the allocation of the site FCC commissioned an updated ecological survey, which was carried out on the 13th April 2022 and updated in August 2025. The survey followed the extended Phase 1 Survey technique and, following dialogue with Conwy Council's Ecologist, was supplemented by Great Crested Newt eDNA surveys and Bat surveys.

46) The main findings of the updated survey report are summarised below:

- There are no statutory or non-statutory ecological designations covering the site, the nearest is the Liverpool Bay SPA which is circa 250m to the north.
- No SPA designated bird species were recorded using the lagoon in Area 3;
- The GCN eDNA surveys returned a negative result;
- 12 key species of invertebrates were recorded;
- No reptiles were recorded;
- No badger sets were recorded;
- Bat movements confirmed in transects;
- There were no bats roosting in the existing buildings across the site;
- Bat hibernating confirmed in 2017 survey in two of the tunnels; due to safety issues it was not possible to verify these results in 2025. It has therefore been assumed that bats are present within the and a bat method statement and mitigation strategy has been prepared to guide any future development on the site.
- Japanese knotweed, an invasive plant species was identified at five locations through the survey area. This needs to be treated by a specialist contractor.

47) The report offers the following recommendations:

- a derogation licence will be needed from Natural Resources Wales for the removal of bats from tunnels before works can commence.
 - part of the site (or the wider landholding) could be set aside, and its long-term management secured, where appropriate, to provide long-term biodiversity improvements.
 - Any future planning application for development on the site should be accompanied by a habitat and species management plan to ensure that the site is effectively managed for biodiversity.
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- Any future development to be the subject of a lighting assessment to ensure quarry faces and 'bat habitat' remain unaffected by development lighting. Any planting should comprise native species appropriate to the existing flora and setting of the site.
- 48) In summary, whilst there are some ecological constraints to the development of the site and some existing features would be lost, none are considered insurmountable. There is also the potential for significant improvements on the wider landholding to offset any impact.
- 49) The proposed allocation has been given consideration by Natural Resources Wales (NRW) and the 2025 ecology reports have been reviewed and commented upon by Conwy Council's Ecologist. NRW raised no objections to the site's allocation and provided some general advice on what would be needed to accompany any future planning application for employment development at the site. The Council's ecologist has also raised no formal objection to the proposed allocation but has made a series of recommendations for policy wording, particularly around further assessment and mitigation of bats and the ability to deliver a biodiversity net benefit. FCC has confirmed their acceptance of the proposed recommendations and have provided further information to evidence why the biodiversity net gain will be possible.
- 50) A final response is currently awaited from the Council's ecologist.

Heritage

- 51) DCC commissioned an archaeological desk-based assessment of Areas 1-3 of the former quarry. The assessment was carried out in April 2023 following consultation with the Conwy County Borough Council (CCBC) and the Clwyd Powys Archaeological Trust (CPAT), the findings were informed and supplemented by a site visit.
- 52) The assessment established that there are historic features within areas 1-3, all of which are associated with its industrial and mining heritage. By far the most significant features identified were the remains of two former Hoffman Kilns within Area 1, which are nationally rare asset types. The assessment also identified other historic features within Area 1 and a more limited assemblage of archaeological
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remains within Areas 2 and 3, none of which carries the same significance as the Kiln's

- 53) FCC have subsequently established that the Hoffmann Kilns are not located within the parts of Area 1 that would be suitable for future development and as such, they would not be directly impacted were the site to be allocated in the emerging Local Plan.
- 54) The outcome of the desk-based assessment and the prospect of solar on Area 4 have been the subject of consultation with Cadw's Historic Environment Branch. Cadw confirmed that they have no objection to the site's allocation subject to the implementation of further mitigation. In terms of the Hoffman Kilns, Cadw confirmed that the remains are likely to be of national importance and are likely to meet the criteria for designation as a scheduled monument. They consider that the Allocation of this area would enable the preservation and conservation of the Kiln in any development mitigating any potential impact on its setting and supporting the process of its designation. On this basis they are satisfied that Area A can be allocated for industrial development, subject to the Kiln being protected and conserved in the planning application for Area 1.
- 55) A copy of the Archaeological Desk Based Assessment and Written Scheme of Investigation can be made available upon request.

Viability

- 56) FCC have obtained technical advice on the suitability and availability of material for the construction of the development platforms within Areas 2 and 3. This confirms that
- it is technically feasible to develop the platforms using inert material and existing on-site material and this can be placed to a specification to suit various end uses;
 - there is a variety of fill material that is suitable for the construction of the platforms; and
 - significant volumes of suitable fill material are already being deposited at the existing Landfill site. When the landfill restoration operations end restoration soils will be diverted into these areas.
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57) .

58) Finally, FCC have also obtained advice from land agents (Leggat Owen) regarding the commercial viability of the site, were it to come forward for employment related development. This concludes that there is a strong demand for employment related development in North Wales, particularly along the A55 corridor.

Utilities Connections

59) There are a range of utilities that currently serve the Llanddulas Complex and others within the immediate locally. As such, there is currently no reason to suggest that there would be any significant limitations in that regard.

Conclusion

60) The assessments carried out by CCBC and those subsequently undertaken by FCC, have not identified any significant environmental and technical constraints to the allocation of Areas 1-4 for employment / waste management related development.
